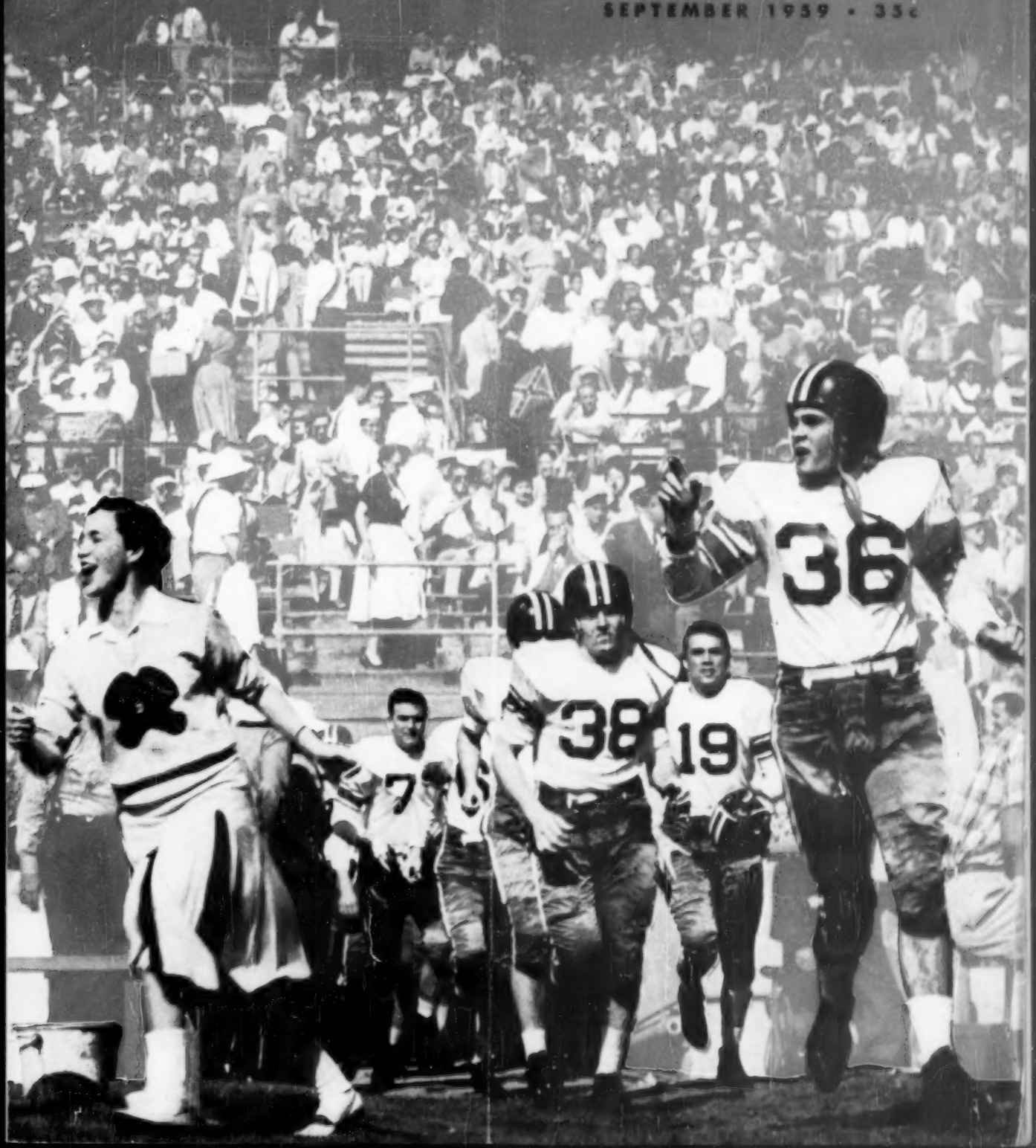
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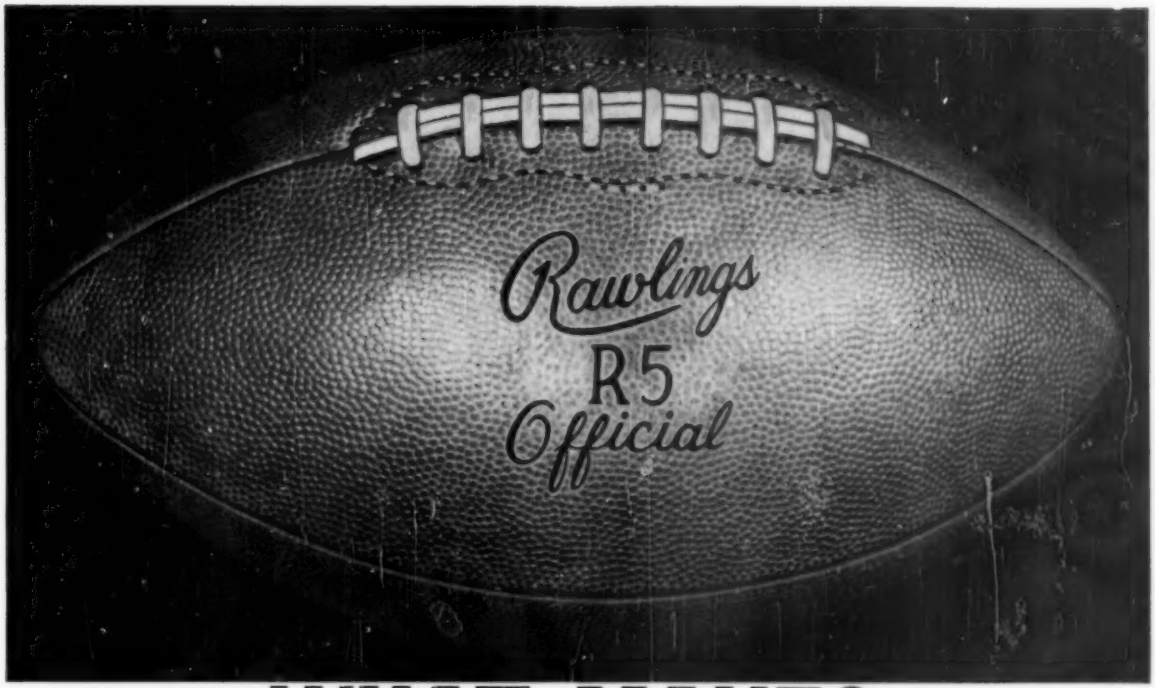
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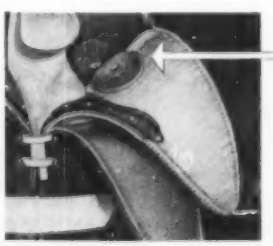
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VOLUME 29 • NUMBER 1 • SEPTEMBER 1959

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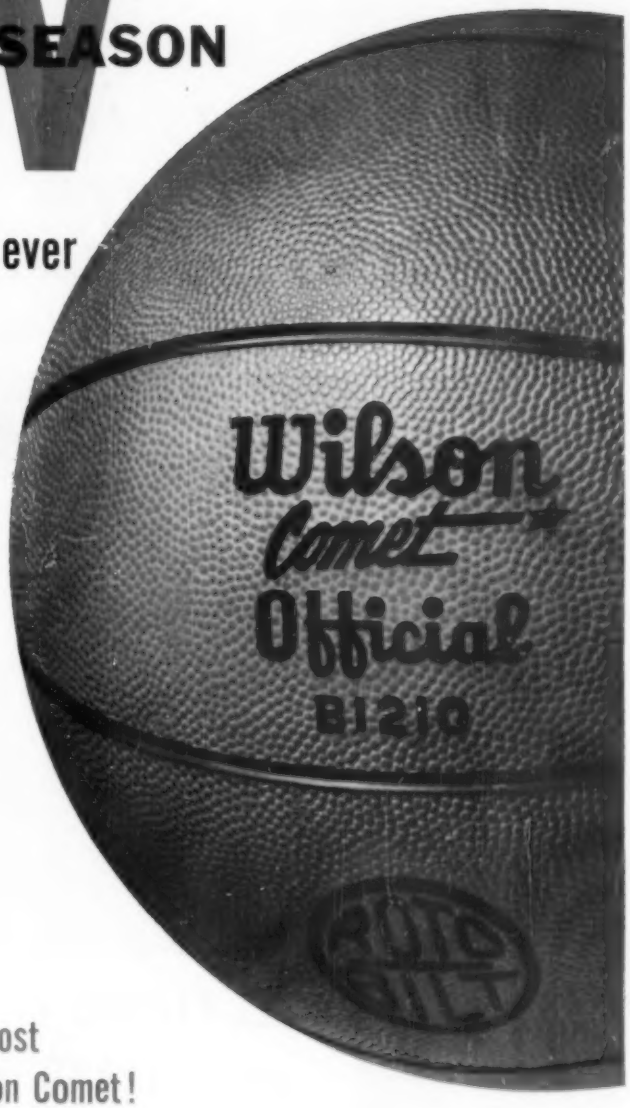
447 BPA

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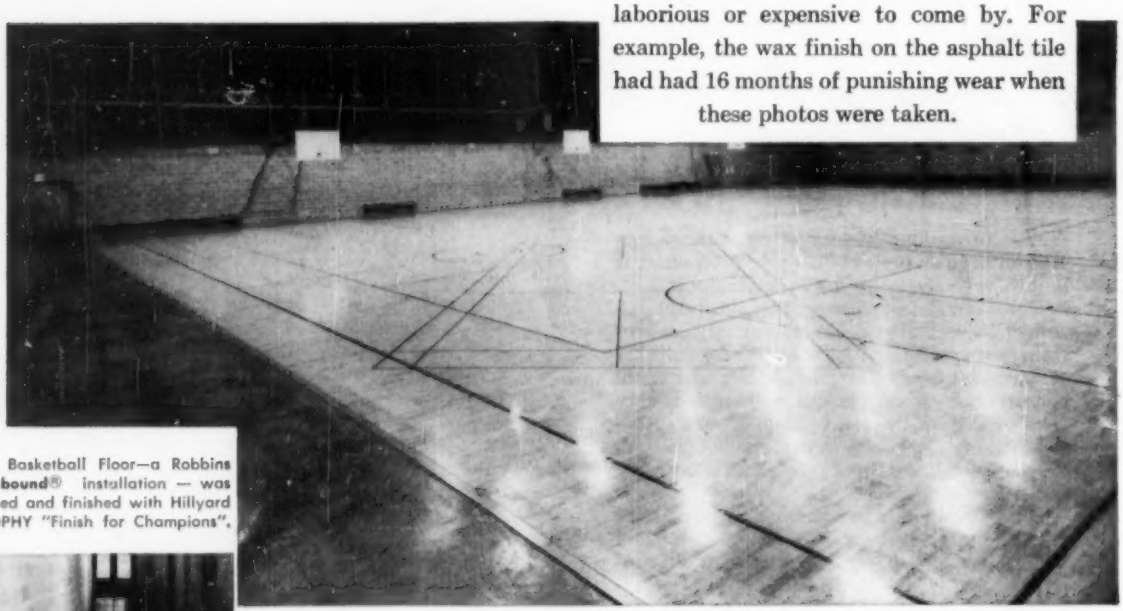
At Tulane University

"they all say it's the cleanest gym they've seen!"

According to Ben Abadie, Director of Intramural Sports, visitors to Tulane University's Favrot Intramural Field House always praise the beautiful appearance of the floors.

It's a perfect environment for instilling the well-being, confidence, and personal neatness that are permanent benefits of physical education.

Contrary to visitors' beliefs, however, the superb condition of these floors was not laborious or expensive to come by. For example, the wax finish on the asphalt tile had had 16 months of punishing wear when these photos were taken.



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Asphalt Tile in Corridors and Offices was finished with Hillyard Prime No. 1 Carnauba SUPER HIL-BRITE wax.



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Here Below

Pitch for the "little guys"

WHEN we arrived at Newark, Del., to shoot the Winged T that Dave Nelson has made so famous (see pages 7-11), we were deeply impressed by the cordiality of Dave and his staff, by the pretty U. of Delaware campus, and by Mrs. Nelson's delicious home cooking.

But when the Hornet backfield arrived on the field, our enthusiasm dimmed a bit. Having spent too much time around the big-time college and pro outfits, we expected much more size and maturity. The Delaware boys looked — to our spoiled eyes—like a nice high school backfield. And when Dave told us that his fullback had never even played high school ball, our trepidations soared.

Our fears lasted for precisely three seconds—the time it took the boys to run their first play. Their speed, deception, and execution, were marvelous. Though standing just a yard in front of the center, with no beefy linemen to block our view, we could hardly follow the ball! We shot 11 sequences and didn't know who had the oblate spheroid on at least half of them.

That, of course, speaks encyclopedias for the caliber of the Delaware coaching staff.

WITH football becoming more and more a playground for the behemoth, it's quite comforting to find Bobby Dodd making a pitch for the little guy.

"There's no boy too small to play high school, college or even pro football, if he has the ability and the guts," the famous Georgia Tech coach asserts.

"Don't ever turn down a boy just because of his size. Those little guys with quick and good reactions can make your team a hit. Some of our best players have been small. They work so much harder to do the job for you."

"SINCE 1947, when I was a sophomore at Ithaca College, I've been a subscriber to *Scholastic Coach*," writes Maurice R. Blake, football coach at Morris Hills Regional High in Rockaway, N. J. "Needless to say, it has been a fine association that has given me many fine reading hours.

"Last Saturday evening I decided to go through some of the back issues (I have them all since 1948-49) and came across the list of outstanding football and college coaches you published in the May 1950 issue. Seldom has anything brought home so conclusively the lack of security and the hazards of coaching.

"It was terribly dismaying to discover the attrition rate among these finest of coaches and men. Of the 26 football men listed, only five (Wally Butts, Bobby Dodd, Ray Eliot, Lefty James, and Bud Wilkinson) are still coaching at the same school, and several of them have known some anxious moments.

"Six others have switched jobs (some of them several times), two are deceased, and 13—exactly half of them—are now out of coaching, either by choice or request. And, remember, these were the absolute top-notchers only 10 years ago.

"Among the 20 basketball coaches listed, seven are still on the same job, seven others have changed affiliations, one is deceased, and five are no longer in coaching."

Coaches in the big time are thoroughly aware of the hazards of their profession, and you can't depreciate their pay and prestige. But the pressure on them to win, win, and keep winning is barbarous and indecent.

DON'T look now, but baseball is rapidly losing its grip on first place in the sports-interest standings. According to a comprehensive survey by the Associated Press, big league baseball still leads the sports-interest parade with 80.9%, but college football is now breathing on its neck with 80.5% and pro football has thundered up to 77.3%.

Strung behind them are college basketball (61.0), boxing (56.1), golf (55.5), fishing (48.9), hunting (43.7), bowling (39.8), pro basketball (37.9), track and field (37.4), horse racing (34.5), tennis (30.9), automobile racing (25.9), motorboating (24.2), swimming (22.2), and minor leage baseball (21.3).

Possibly the most significant aspect of the poll is the strong showing made by the participant sports of golf, fishing, hunting, and bowling. That lends substance to our insistent clamoring for a greater variety of carry-over sports in our school activity program. These are the sports that squarely fit the kids' recreational needs in later life.

THOUGH big leage baseball may be slumping in the Land of the Free and the Home of the Brave, the sport is still running a temperature in the Land of the Rising Sun.

Our peripatetic buddy, Mickey McConnell, Training Director for Little League Baseball, recently returned from a trip to the Orient and informs us that "the High School Baseball Tournament in Japan rivals the Olympic Games as a spectacle."

He paints an amazing picture of the schoolboy tourney: "Imagine 80,000 spectators jam-packing the stadium for opening ceremonies at 9 A. M. on a Wednesday, with massed bands leading the 26 teams onto the field, the players marching like they had been rehearsed for several years at West Point, the team captains dipping their flags to the President of the National High School Baseball Association as the members of the squads recited the sportsman's code, a 200 voice choir of high school girls singing the National High School Song and the National Anthem, the captains raising the flag as carrier pigeons ascended to carry the news to the home communities of each school, helium balloons carrying aloft the team pennants amid fireworks and planes swooping over the stadium trailing colored smoke.

"This gives you an idea of how Japan goes for baseball!"

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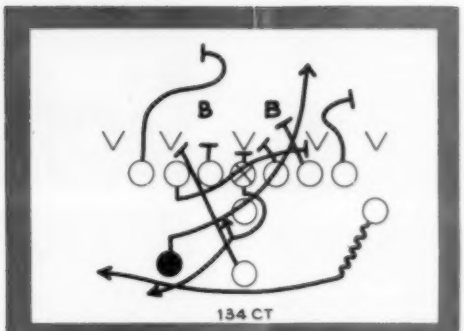
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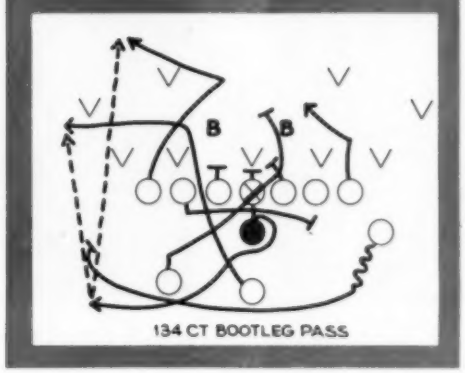
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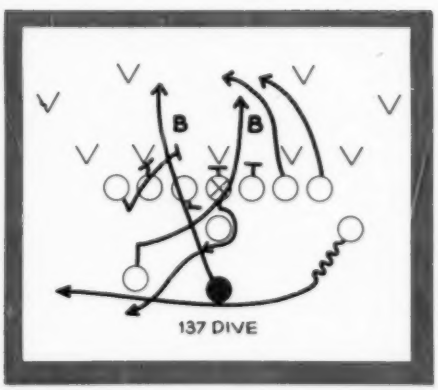
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134 CT

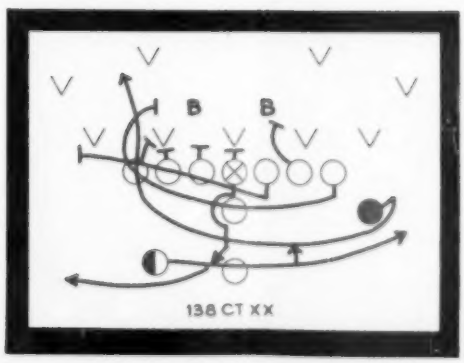


134 CT BOOTLEG PASS



137 DIVE

Running from the Winged T



138 CT XX

By DAVE NELSON, HAROLD RAYMOND, and MILO LUDE

Coaches, University of Delaware

IN THE September 1957 issue of *Scholastic Coach*, the writer analyzed the Delaware Wing T in general terms. The article described the background, philosophy, and numbering system, but space forbade the details and assignments of the plays.

Since that time, Forest Evashevski's Iowa Hawkeyes — *using the identical system*—have captured the nation's fancy with two Rose Bowl triumphs and record-shattering offensive performances in the Western Conference.

From the prejudiced position of a satellite created by Iowa's success, we'd like to present a few plays from the Winged T—expounding assignments, details, and coaching points, augmented by sequence pictures of the actual plays.

In the analysis, the linemen are referred to by numbers. The right end is the No. 2 man; right tackle, No. 3; right guard, No. 4; center, No. 5; left guard, No. 6; left tackle, No. 7; and left end, No. 8.

134CT (COUNTER):

The quarterback takes his stance with his left foot back. If there's a man on the center, he pivots on his left foot, placing his right foot on the middle line (as shown in the photo sequence). If no one is on the center, the quarterback will place his right foot slightly over the middle line. This step will enable the left half to stay close to the lead post.

Just as the fullback passes him, the

134 COUNTER



quarterback bends his path toward the left half's original spot. He should be ready to hand off the ball inside with his right hand the instant the fullback has passed him. He snaps the hand-off quickly to the left half and brings his hand back to an imaginary ball.

After the hand-off, the quarterback fakes a bootleg around the left end. He shouldn't go deeper than five yards so that his movement will quickly apply maximum pressure on the defensive end.

The left half rocks the weight on his left foot and head-fakes to his left, as he takes his first step with his right foot. This rocking action and head fake shouldn't consume a great deal of time as the left half must stay close to the fullback's tail.

The left half should drive directly for the lead post seam as he receives the ball on his right hip. He must be ready to move down with the lead block if it's exceptional. The left half adjusts to the block across to a backer and then is ready to cut back to his right.

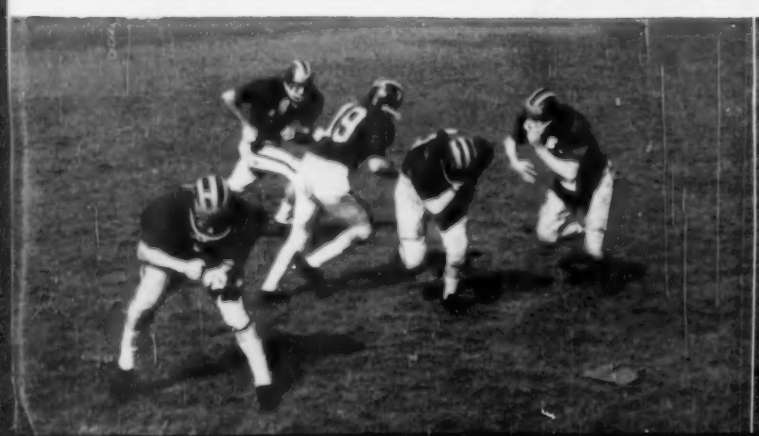
The right half leaves in motion as



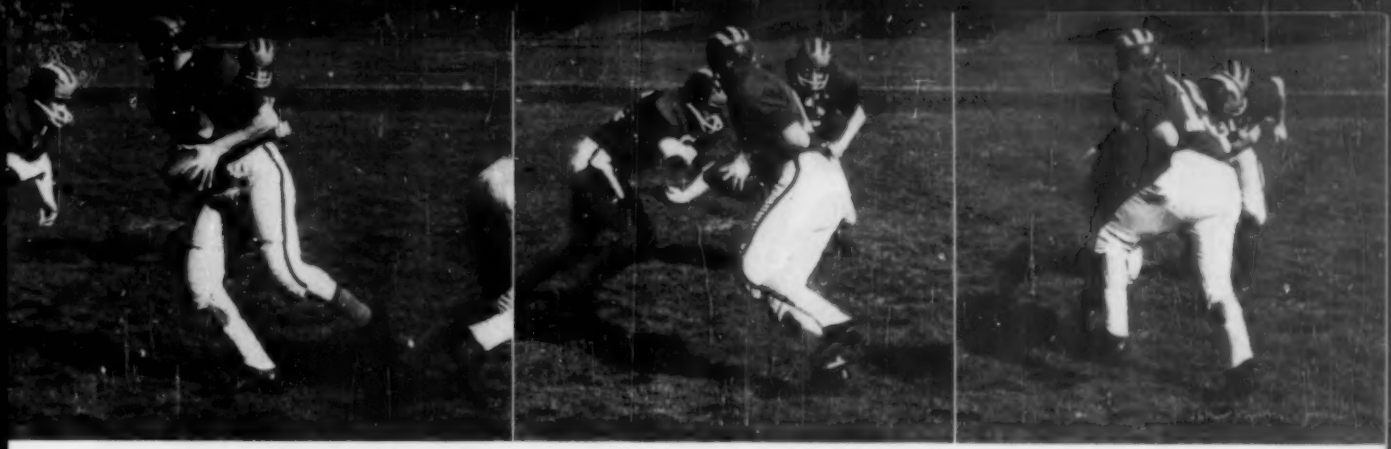
134 COUNTER BOOTLEG PASS



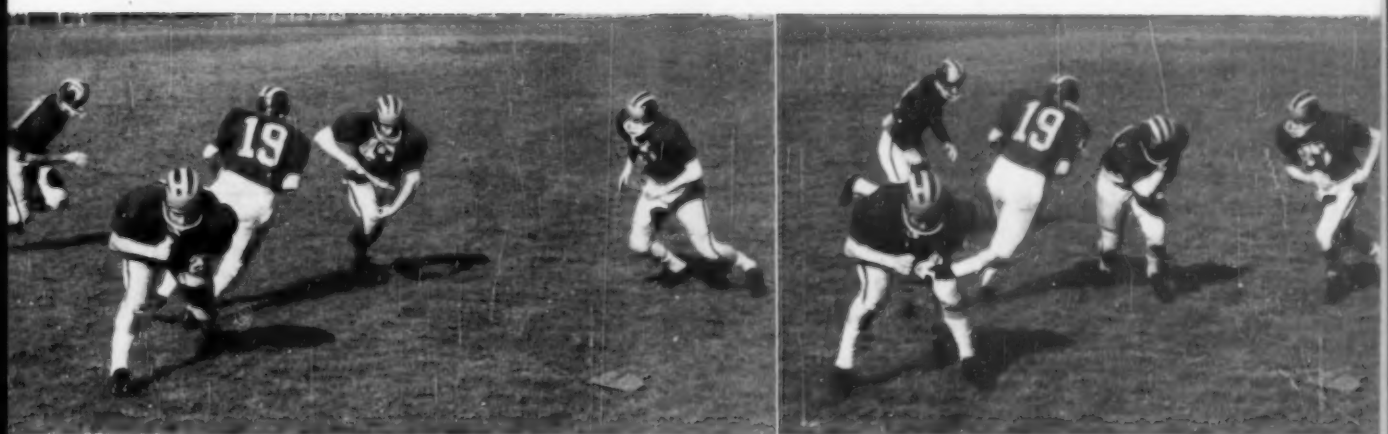


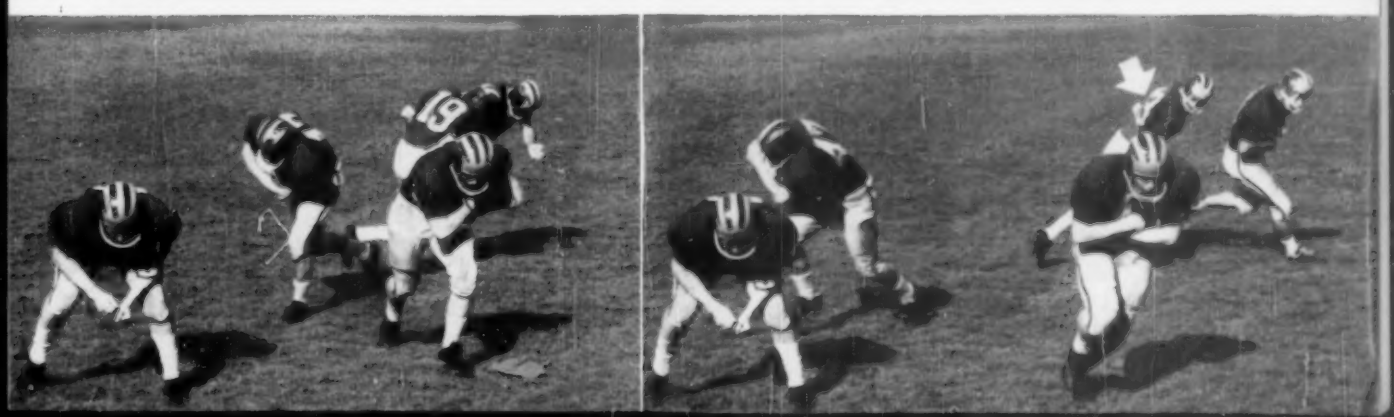


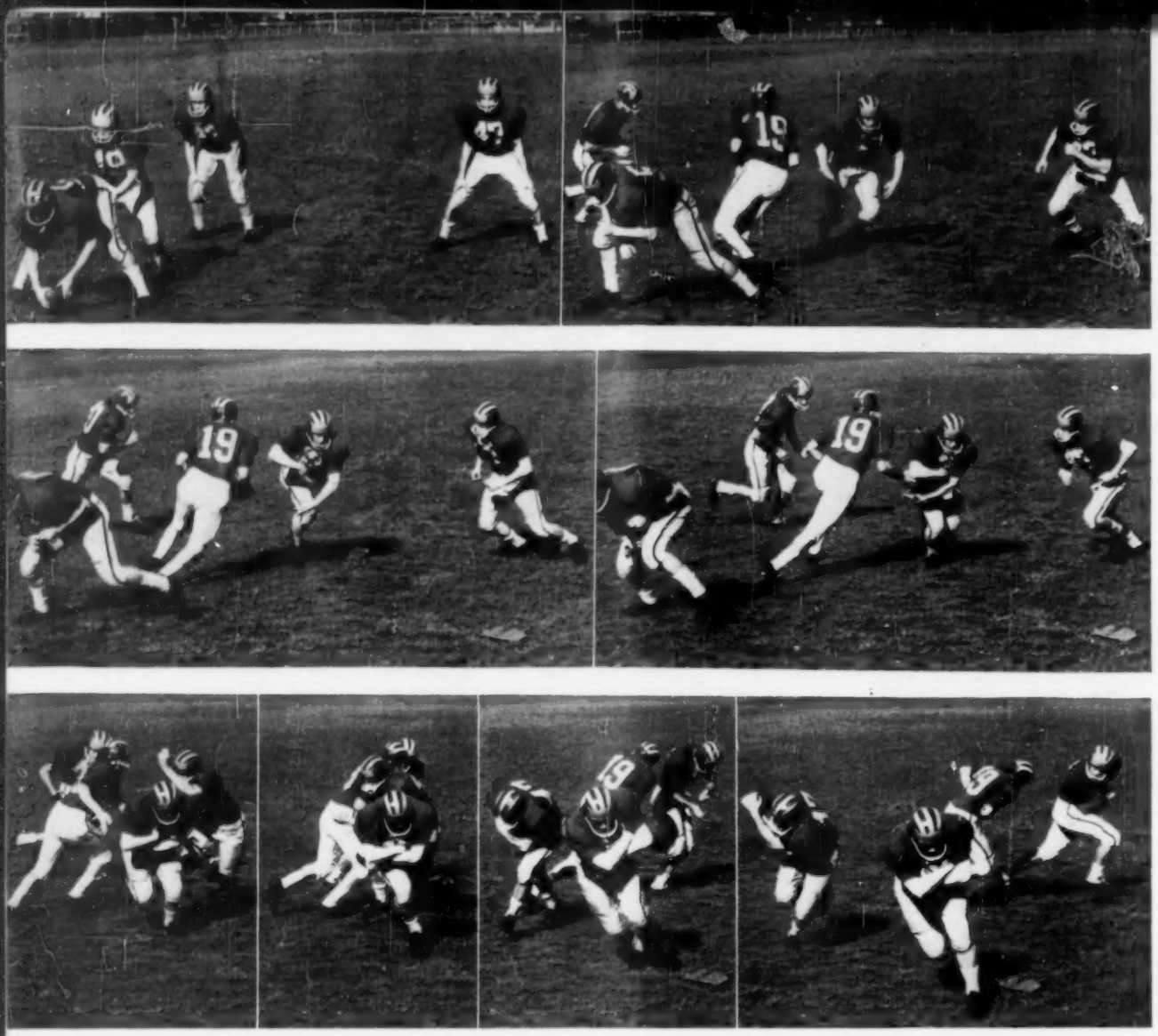












137 DIVE

though running 129, but doesn't leave as soon, for he should lead the quarterback by only a yard as they spring around the left end.

I'd like to point out that it's impossible for the internal defensive men to cue from the quarterback's feet. We're able to post lead a man over the center either way by running 126 and 134CT, both of which call for the quarterback's left foot to be back.

2 Man: Block on the linebacker (first linebacker from outside shoulder of 3 man). Your split will be normal 3 feet. If there's no *ON* linebacker get inside position and block out on first opposition color in the secondary.

3 Man: Block across to a linebacker (this is the first linebacker head on the #4 man or to the off side).

4 Man: lead-left-principle. If a defensive man is on # 5 lead, if no one is on #5 and there's a man in area (secondary) or threatened by a stunting man in area, block left. If no one on #5 and not threatened by a stunt, then exercise principles of blocking first man to outside.

5 Man: Post if there's no one on you, then you become the lead; the direction or movement of the block remains the same.

6 Man: Block a man on or first man to your outside; if there's no man on #5, post man on you.

7 Man: Pull for the tail of #5 man, block inside-out on the first man on or outside #5. (Always gain ground, get inside position and expect to find man on line of scrimmage or laying off; also expect to find defensive man low and tough.)

8 Man: Block in cut-off (2 yards in advance and 1 yard inside where you intercept ball-carrier's course). If two defensive men are inside you and outside #6, check the 2nd man.

134CT BOOTLEG PASS:

134CT bootleg pass is of course designed to look like 134CT. The quarterback pivots as in 134CT with no defensive man over the center. The ball is placed on his pelvis with his left hand. The long axis of the ball is perpendicular to the ground.

The quarterback snaps a right hand fake to the left half and then allows his right hand to drag after him. He looks over his right shoulder to watch the left half as he fights his way into the center left guard seam. As the quarterback bends his path toward the left half, the ball slides to his left hip so that the right defensive end cannot possibly see it. The ball is completely hidden.

The quarterback follows the right halfback to the outside at a depth of five yards. The situation will dictate his action outside. If he needs four yards or more, he should look quickly for the fullback in the flat. If he's going for a touchdown on a first down situation, he should look for the left end deep. However, the success of the pass is usually determined by how well the quarterback threatens the flank after the ball is spotted.

The fullback drives for the left-guard-left-tackle seam, picks an open spot and runs into the left flat at a depth of five yards.

The right half fakes 134CT, then blocks outside-in on the defensive right end.

2 Man: Take three steps forward, run across the formation. Split the fullback and 8 man's patterns—make a triangle out of the pattern. You're slightly delayed.

3 Man: Take an aggressive step with inside foot, block man on or first man to your outside, using a regular pass protection block.

4 Man: Lead (power block—drive of double team). If no one is on #5, take an aggressive step with inside foot and take man on with a regular pass protection block. If no one is on #5 nor on you, jab step forward and check area.

5 Man: Post if no one is on you; and if you're threatened by stunt or cross-charge, check area. If your area isn't threatened, then lead and #6 will post.

6 Man: Block man on or to your outside; if no one is on #5, post the man on you.

7 Man: Pull close to line of scrimmage, head for tail of #3 man, block the first man outside of #3; however, place head on outside—use a pivot block.

8 Man: Run bootleg pass route. Take 4 to 5 steps on 45° course to the inside, looking over your inside shoulder; this is the course run on cut-off block. As you lose the defensive halfback, break on a flag pattern behind him; this will be at a depth of 13 to 15 yards.

137 DIVE: The quarterback takes his stance with his left foot back. He pivots on this foot and plants his right on the middle line as he moves toward the fullback.

He jabs the ball to the fullback as quickly as possible, hands off, and then brings both hands back to an imaginary ball at his belt. He should flash a right-hand 134CT fake to the left half and then fake a bootleg.

The fullback drives for the 6, 7 seam, receives the ball under his right arm. (The fullback doesn't take the ball with our regular technique since this hand-off is exposed to the defense). He's primarily conscious of the 8 man's block since the draw of the play may make the 7 man's block difficult.

The left half rocks his weight to his left foot and fakes 134CT being certain that he keeps his weight well over to insure the appearance of carrying the ball. He should fight his way through the line.

The right half fakes 134CT.

2 Man: Widen. Block in cut-off (see 2 man on 129 for cut-off explanation).

3 Man: Release to cut-off; if a man is on you, widen and go inside him.

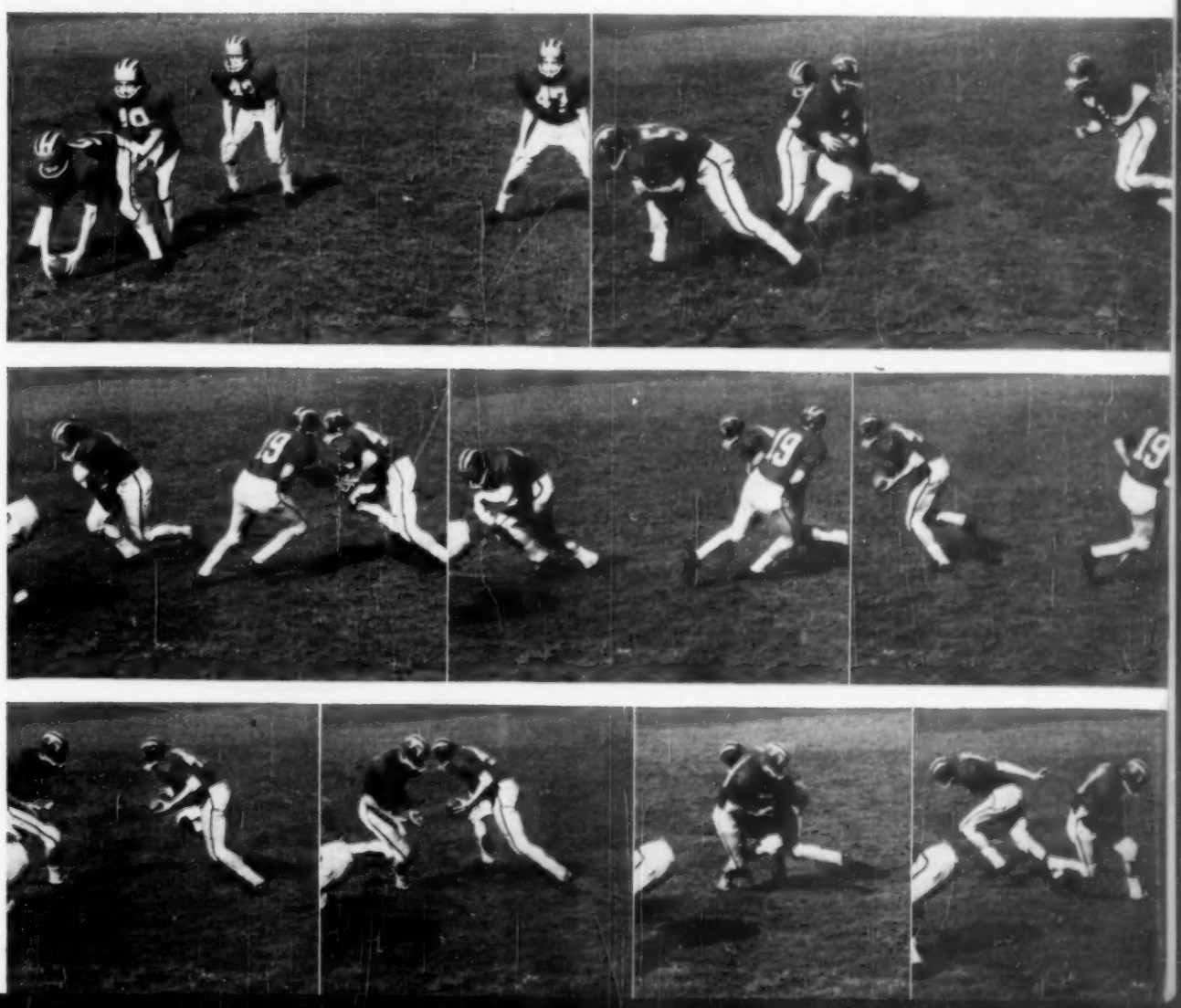
4 Man: Block a man on you; if there's no man on, then release to the cut-off.

5 Man: Block a man on you or in the gap on your right. If no one on or in your right gap, release to cut-off.

6 Man: Pull away, block inside out on the first opposition color you come to.

(Continued on page 65)

138 COUNTER CRISS-CROSS



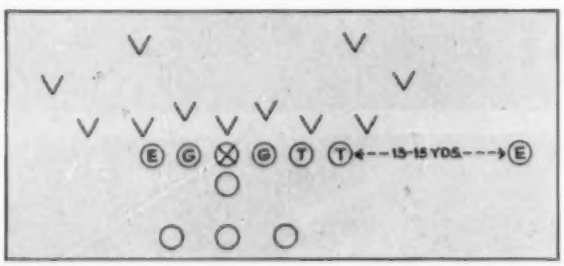
Attacking the Perimeter With the Lonely End Offense

By CHUCK KNOX and KEN MEYER
Assistant Football Coaches, Wake Forest College

OFFENSES are constantly changing in an attempt to stay one jump ahead of the defense. As new offenses appear, defenses to cope with them soon develop which necessitate further offensive innovations. This is a never-ending cycle which also works in the opposite direction.

The latest offensive maneuver designed to thwart the very popular nine-man front defensive alignment is the Lonesome End. This offense is predicated on destroying the effectiveness of the nine-man front defense.

The basic concept of the Lonesome End attack is based on the following principles: (1) To force defense to cover wide area, (2) To force defense to make adjustments, particularly in the perimeter, and then to exploit these adjustments, and (3) To force defense to withdraw from a nine-man front and then attack it with options, roll-out passes and other plays which are difficult to stop without a nine man front.

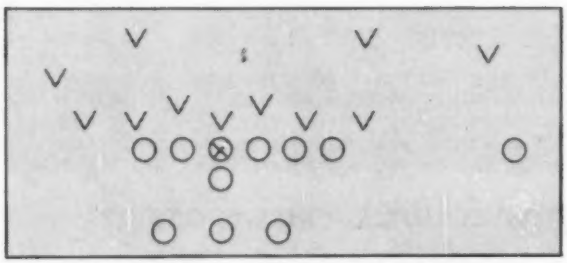


Diag. 1, Lonely End Offense with Unbalanced Line Against 5-4 Which Hasn't Adjusted in Perimeter

Diag. 1 shows the lonesome end offense involving an unbalanced line with the strong-side end split out 13 to 15 yards, and a 5-4 defensive alignment which hasn't adjusted in the perimeter.

With this defensive arrangement, it would be impossible to cover the lonesome end on the deep or wide pass routes. Consequently, most teams employing a box defense will adjust in one of two ways: (1) They will either loosen the corner man or (2) They may full revolve into a three-deep zone. Either one of these two adjustments can now be exploited by the offensive team.

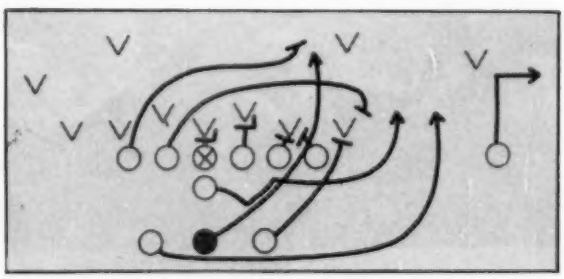
If they loosen the corner man, as shown in **Diag. 2**, the quarterback should think in terms of launching his attack to that side.



Diag. 2, Defense with Corner Man Loosened

The reasons for that are: (1) Defense is playing an Oklahoma end on that side without corner support, (2) Halfback is forced to cover lonesome man for man, (3) The corner man is loosened to a point where he's unable to cover both the Lonesome End deep outside and also to come up to contain the sweep.

The corner man who has loosened cannot support against a run with the Lonesome End releasing downfield because the safety couldn't cover the end on an angle out route. In the attack to the lonesome end side, a balanced offensive embracing runs and passes can be undertaken since the defense is playing an Oklahoma-type end without corner support. Power off-tackle, sweeps and options should be very effective.

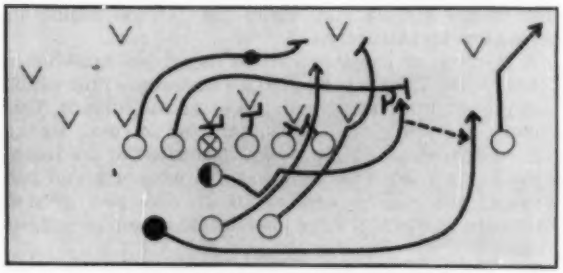


Diag. 3, Off-Tackle Power Play with Double Team on Tackle and RH Kicking the End Out

Diag. 3 shows an off-tackle power play utilizing a double-team block on the defensive tackle, the right halfback kicking the end out with the threat of the option making the defensive end play loose.

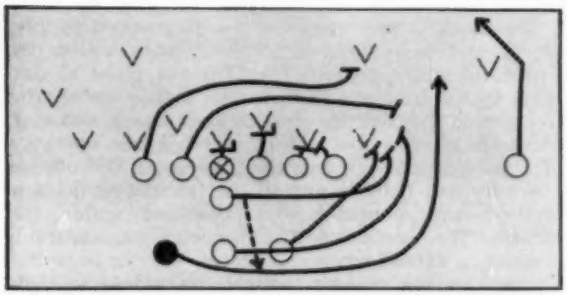
After the off-tackle play has been established and

the defensive end is committing himself inside, then the option off the same action can be run. **Diag. 4** shows the option with the double team on the defensive tackle, the fullback faking off-tackle, and the right halfback releasing downfield. The quarterback is keeping the ball and turning downfield, prepared to option on the first enemy color.



Diag. 4, Option Off Power Play with FB Faking Off Tackle and RH Releasing Downfield

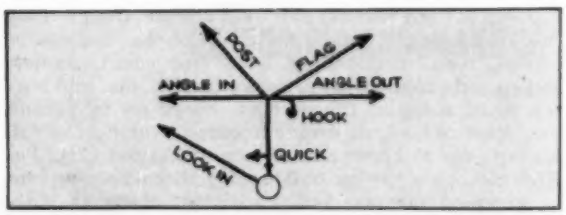
Another running play which should be effective against this type of coverage is shown in **Diag. 5.** This is a power sweep with the double team on defensive tackle, right halfback hooking the end, and the fullback and quarterback leading. In the above plays, the Lonesome End will be releasing downfield and experimenting on the man covering him.



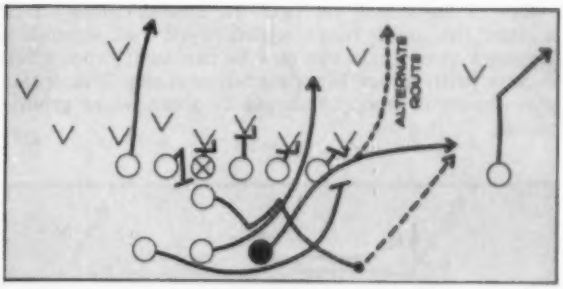
Diag. 5, Power Sweep with RH Hooking the End and Fullback and Quarterback Leading Play

There are a number of pass patterns using the theory of an individual pass receiver working on an individual defender, and the theory of flooding a zone which can be used. **Diag. 6** shows the individual routes which can be used.

These passes are usually thrown off drop-back action. The quick and look-in passes are particularly effective against a loosened corner man who's giving the end a cushion. On the quick pass, the end takes two steps beginning with his left foot and then turns in and receives the ball chest high from the quarterback. The



Diag. 6, Individual Pass Receiving Routes

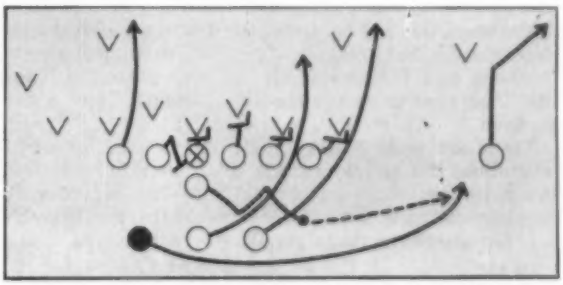


Diag. 7, Pass Developing Off Power Off-Tackle Play

look-in pass is thrown to the lonesome end breaking in toward the middle at a 45° angle.

There are a number of passes embodying the principle of flooding a zone which can be thrown off play action. These passes work well against a loosened corner man. **Diag. 7** shows a pass developing off the power off-tackle play.

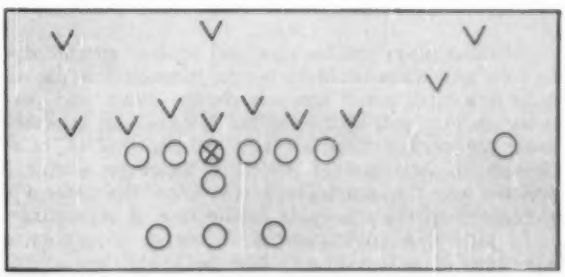
The Lonesome End is driving deep forcing the corner man to cover him. The right halfback will run a flat route into the area cleared by the Lonesome End. If the left safety attempts to cover the halfback in the flat, the alternate route with the halfback faking going into the flat and then breaking through the original position of the safety man can be run.



Diag. 8, Pass Off Same Running Action with LH Swinging Wide to Lonely End Side

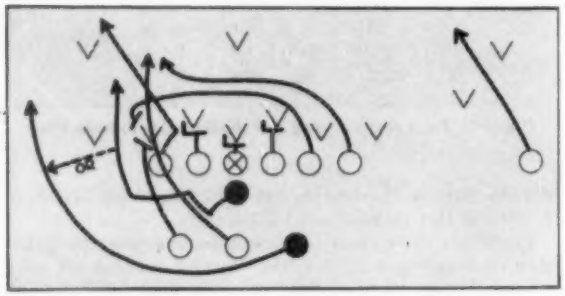
Another pass off the same running action with the left halfback swinging wide to the lonesome side is shown in **Diag. 8.**

If the defense decides to full revolve to a three-deep zone to the lonesome end side, as shown in **Diag. 9,** the quarterback should think in terms of launching his attack away from the full revolve. The reason for this is because the defense has committed two defenders to the side of lonesome and therefore weakened itself to the opposite side.



Diag. 9, Defense in Full Revolve to Three-Deep Zone to Lonely End Side

One of the strong points of the lonesome end attack is that the same plays which were run against a loosened corner man can now be run away from a full revolve with minor blocking adjustments. The option play shown in **Diag. 10** should be a consistent ground gainer.

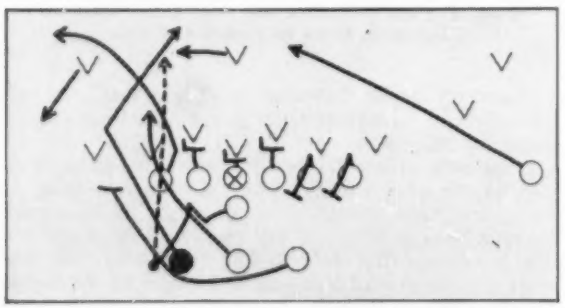


Diag. 10, Option Play Run Away from Full Revolve

With the offensive end releasing deep, the defensive halfback won't be able to give quick support. This is the same theory as the Lonesome End releasing deep. The fullback off-tackle play can be run the same way with the offensive end staying in and blocking.

In the pass offense to this side most of the individual patterns shown in **Diag. 6** can be used. To prevent the safety from doubling up with the halfback on the end, some threat to the middle area must be exerted. Some of the ways this can be done is by driving the Lonesome End into the deep middle zone or by sending the right halfback into that area. All the play passes utilizing the flood zone principle shown in **Diags. 7** and **8** can be used.

There are some teams which like to use a call that will allow the safety man to cover deep outside and the halfback to cover the flat when confronted with the pass shown in **Diag. 11.** Against this type of coverage the alternate route should prove effective.



Diag. 11, Pass Play Against Defense in Which Safety Covers Deep Outside and HB Covers Flat

All these plays are best utilized against specific defensive adjustments. Most teams through the use of defensive hash mark analysis charts, down and distance charts, and other media, prepare the quarterback for certain defenses and adjustments in relationship to various field positions. However, the only positive way the quarterback will know the defensive alignment is when he gets to the line of scrimmage.

To take full advantage of defensive adjustments, a system of automatics should be used. One of the simplest automatics is to have an opposite call whereby a play called to one side can automatically be changed to the same play to the other side at the scrimmage line.

The values of not having the Lonesome End return to the huddle after each play are: (1) Less taxing on the Lonesome End physically as he doesn't have to return to the huddle after each play, (2) Plays can be run faster as the quarterback doesn't have to wait until the Lonesome End has split out 15 yards, (3) In some cases, the Lonesome End standing out to the side of the huddle may make the defense adjust its perimeter prematurely.

A system of communications must be established between the quarterback and the Lonesome End which will permit the end to remain out of the huddle. This system may involve a visual and/or an oral signal.

Two factors which must be transmitted to the Lonesome End are whether the play is a pass or a run and whether the play is coming in his direction or not. There are numerous ways in which this can be accomplished.

For example, the quarterback standing out from the huddle with the right hand on the right hip would indicate a running play to the right. To get a running play to the left, the opposite signal would be given. To signal a pass, the quarterback would have his hands down at his sides.

The halfback on the lonesome end side would use an oral signal to tell the end the pass route to be used. The halfback would make a dummy call on running plays to prevent the defense from catching the signal.

Combinations of signals which might include other members of the team acting as senders could be worked out to prevent the defense from stealing the signs.

The mark of any good team is determined by personnel and the degree of efficiency with which that personnel will carry out the offensive plans as outlined by the coaching staff. In this article we've tried to expound the basic theory, the basic attack, and some of the mechanics that are involved in the operation of a perimeter attack from the Lonesome End offense.

We haven't tried to exploit the fascinating fields of flankers and men-in-motion combined within this offense. The Lonesome End becomes immeasurably tougher to defend when this occurs. It's our hope that you've received enough thoughts and ideas to build a strong attack which will include strength up the middle as well as at the flanks.

With Wake Forest College (Winston-Salem, N. C.) being one of the first teams in the nation to jump aboard the Lonely End band wagon, Scholastic Coach feels fortunate in presenting this fine exegesis on the attack by two outstanding Demon Deacon assistant coaches. Ken Meyer played halfback on two straight unbeaten teams at Denison U. under Woody Hayes. After graduation in 1950, he became head coach at Johnstown, O., where he tied for the county title in his first year. He moved on to East Palestine, O., the next year, then returned to his alma mater (Denison) as a backfield coach, a position he held through the 1957 season. The 1957 team topped the nation's small colleges in both rushing and total offense. Chuck Knox co-captained the 1953 Juniata College undefeated eleven, then remained as head line coach. Juniata stayed unbeaten in 1954, ranking with the country's top small colleges. Chuck then moved on to Tyrone, Pa., High School, as assistant coach, leaving the following year to become head man at Elwood City, Pa., High School. After an outstanding three-year regime, he accepted the position as assistant coach at Wake Forest last March.



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By CHARLES F. DAYTON
DeKalb (Ill.) Community Unit Schools

How Much Is a Coach Worth?

HOW MUCH is a coach worth? How much should he be paid for his various coaching duties?

Nearly every athletic director and coach is familiar with the tabulated results of numerous questionnaires indicating what each school in his state or area pays for specific teaching jobs in athletics. However, this knowledge is of little value in establishing adequate and equitable increments because coaching salaries vary so greatly even between neighboring towns and in the same conference where conditions are pretty much alike.

Most teachers' salary schedules show a minimum wage with numerous increases on an ascending scale until one has reached the top. These increases are based on experience and professional growth in the form of advanced degrees and the number of credit hours beyond a bachelor's or master's degree.

In recent years these schedules have been revised and increases granted all along the line to meet the higher cost of living and to give schools' salary schedules which would attract qualified teachers.

CHART 1

	Min.	Mean	Max.
Football (head)	$300	$600	$1300
Football (asst.)	150	300	550
Basketball (head)	400	600	1300
Basketball (asst.)	200	300	1300
Track (head)	150	300	625
Baseball (head)	200	300	614
Baseball (asst.)	75	200	360
Wrestling	200	375	600
Swimming	240	325	440
Golf	100	200	432
Tennis	150	200	336

But what about the men who teach in the field of athletics plus handling a full load of classes? In a recent survey of 45 Illinois High Schools by Robert F. Catlett, Assistant Superintendent of Cahokia Unit School District #187 of East St. Louis, it was found that the minimum, mean, and maximum increments for these schools were as shown in Chart 1.

It's apparent from the summary of this schedule that there's very little agreement among schools as to what a coach is worth. As evident by this and other studies of coaching increments in numerous secondary schools, many of them are still doing their job for depression wages. Nearly all are being under-paid on the basis of time and effort expended as compared with classroom teaching jobs.

It's hardly reasonable that a football or basketball coach is worth only $300 in one school while another in the same area pays $1300 for a similar job. These discrepancies are also found in increments paid for the coaching of other sports.

They are not found, however, in the basic salary schedules of these schools. There are differences of course and should be depending upon educational background and experience as well as the ability of districts to pay. However, we don't find one school paying over three times as much for a beginning history teacher as that which is paid in a neighboring school.

Another inconsistency closely allied with the above is the fact that nearly all coaches are paid a flat sum for a particular job. When a candidate for a teaching and coaching job discusses salary with the employer, he's shown where he would be placed on the basic salary schedule according to his experience and educational background.

Then he's told that coaching football, for example, pays a certain stipend. This increment is determined by the job and *not in terms of the training and experience of the individual assigned the coaching duties.* He may be a red-cheeked youngster just out of college with a bachelor's degree and no experience, or he may be a veteran with 15 years successful teaching and coaching experience enriched with advanced study well beyond the master's degree.

In nearly all high schools the coaching increments are pre-determined for each job with no allowance for the training and experience of the individual coach.

Why does this situation exist in so many schools?

Is it because we've been so busy revising the basic salary schedule which involves all teachers that we haven't had time to study coaches' salaries?

Is it because those who handle these extra duties are a minority group?

Is there a fear of being accused of overemphasizing athletics?

Or could it be that the coaches themselves are to blame for not presenting a logical and workable increment schedule?

CHART 2

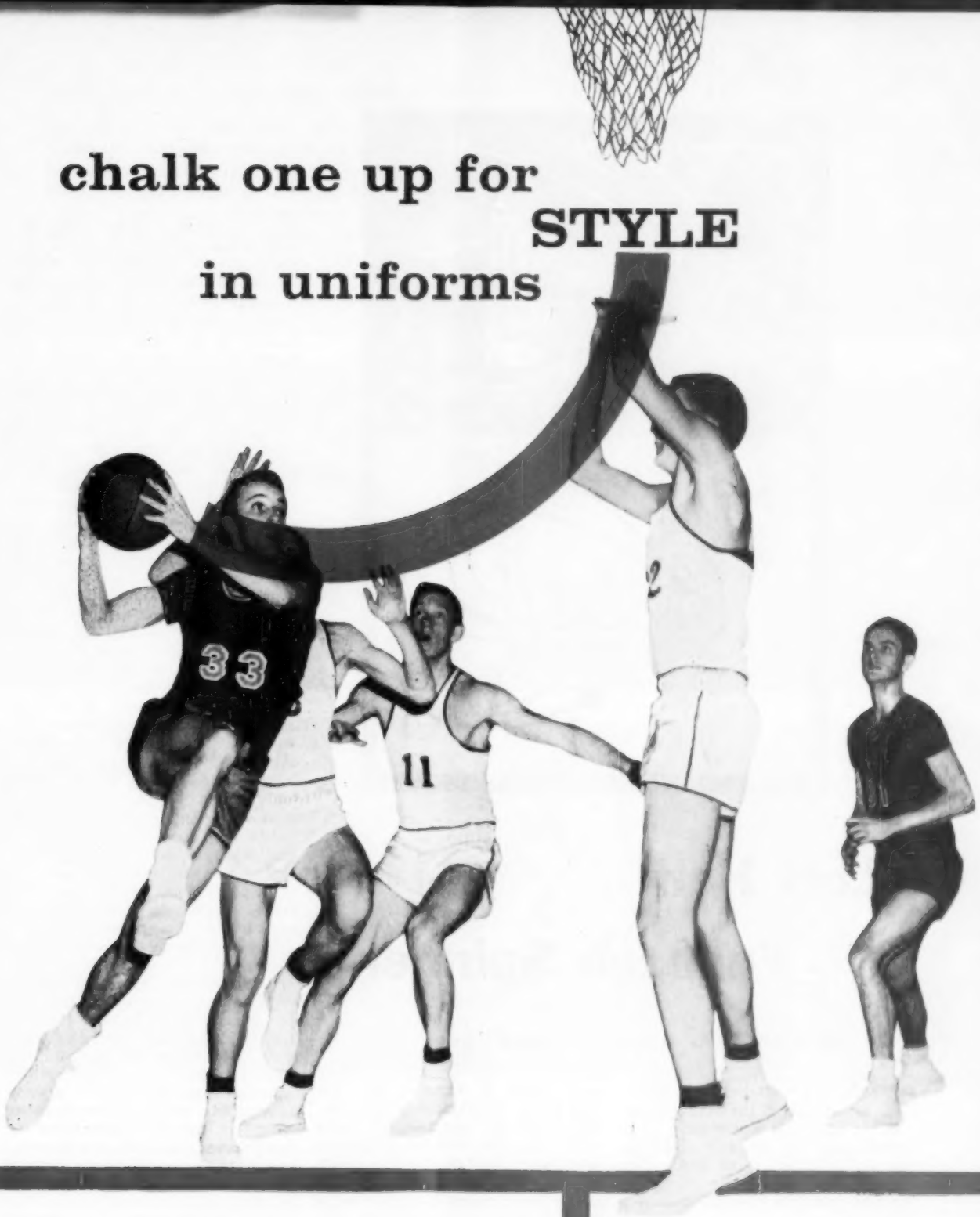
Football (head)	$400
Football (asst.)	300
Basketball (head)	500
Basketball (asst.)	300
Track (head)	300
Swimming	300
Wrestling	400
Golf	200
Tennis	200
Baseball	300
Cross-Country	200
Intramurals	400

Perhaps it's a combination of reasons. At any rate it's time something should be done to attach the increments for these jobs to the basic salary schedule so the individuals handling these tasks will be paid for experience and advanced study. And it also logically follows that when adjustments are made in the basic salary schedule, they'll also be automatically made for coaches.

Board members, administrators, and teachers who believe that the teaching of athletics is an important part of the educational program need to develop a logical and justifiable plan for paying coaches and

(Continued on page 82)

chalk one up for STYLE in uniforms



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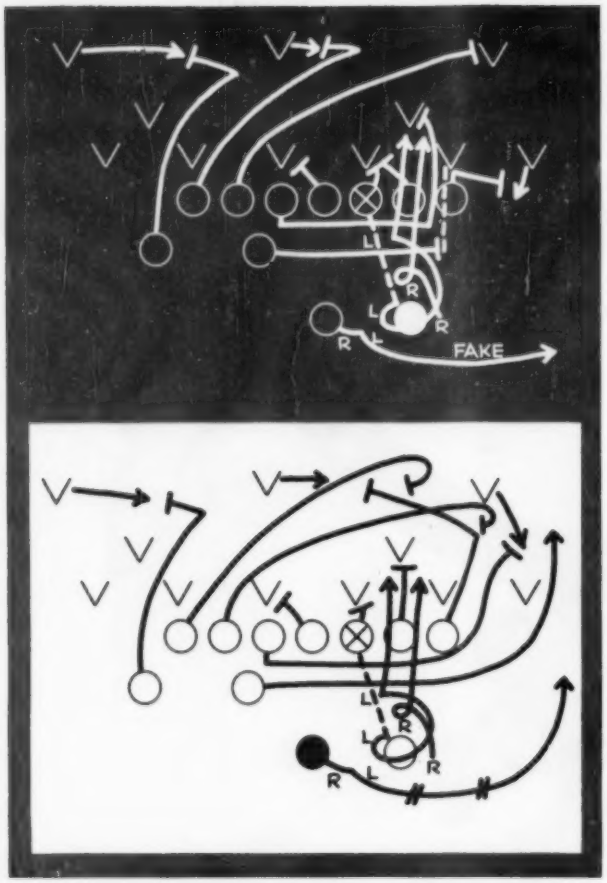
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Left Half Fullback Spinner

By **JOE STANCZYK**, *Backfield Coach, Rutgers University*

THE Left Half-Fullback Spinner Attack in the Single Wing is primarily a deceptive maneuver just like the belly series in the T. Its object is to freeze the defense momentarily so that the blockers can do a more effective job up front.

The faking and spinning also forces the defense to over- or under-commit itself, thereby exposing a weakness either inside or outside. A very effective passing sequence can also be established from this maneuver either with the halfback or the fullback passing.

We're mainly concerned with the mechanics of the ball-handling, faking, and spinning of the two backs solely in terms of the running game. You'll note by the diagrams and pictures that the spinning is executed from left formation with the left half doing the primary ball-handling and spinning. But as far as the spinning is concerned, it could be applied to a fullback spin sequence from right formation as well. The halfback would then become the faking back.

The left half lines up at a depth of four and a half yards from the ball, with his left foot on the right foot of the center, placing him almost directly behind the #10 man. He assumes a well-balanced, parallel, semi-upright stance, eyes on the ball, palms of the hands resting lightly on and above the knees. The weight and center of gravity is over the legs with slightly more weight on the left foot which becomes the initial pivot foot in the full spin.

The fullback takes the same stance, at the same depth as the halfback and directly behind the #9 man. His posture is indentical with the left half except that his weight needn't be accented. The distance between the two backs is approximately three feet. This is important from the viewpoint of the faking between the two backs.

The center is a very important part of the Spinning Attack. It's imperative that he pass the ball back to the designated area with moderate speed and accuracy.

The ball must be passed back to a spot just below and to the inside of the halfback's left hip. It's met in front of the target area with outstretched and relaxed hands and guided in. As the ball is brought in, the elbows are pinned to the side and front of the hips, preventing the ball from being brought in against the body and thus permitting proper manipulation of the ball in faking and handing off.

The pivot on the left foot is started as the ball reaches the hands. This is all done in one fluid motion on the ball of the foot. It's often said that the line of flight of the pass from center should help or force the halfback into the first phase of his spin.

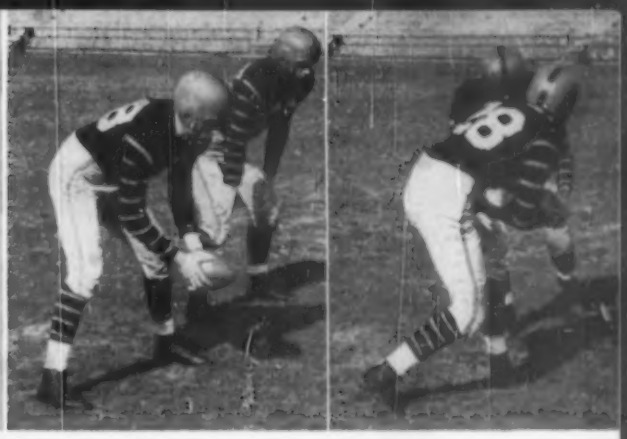
The initial phase of the spin brings the right foot around to the left and toward the line of scrimmage, with the normal turning of the body on the pivot foot. *The right foot and leg are planted and aligned with the hole to be hit* by the halfback. As this first phase of the full spin is consummated, the center of gravity is over the left or pivot foot, the spread of the right foot from the left or pivot foot remains at its original distance, and the body posture is maintained at its original vertical level.

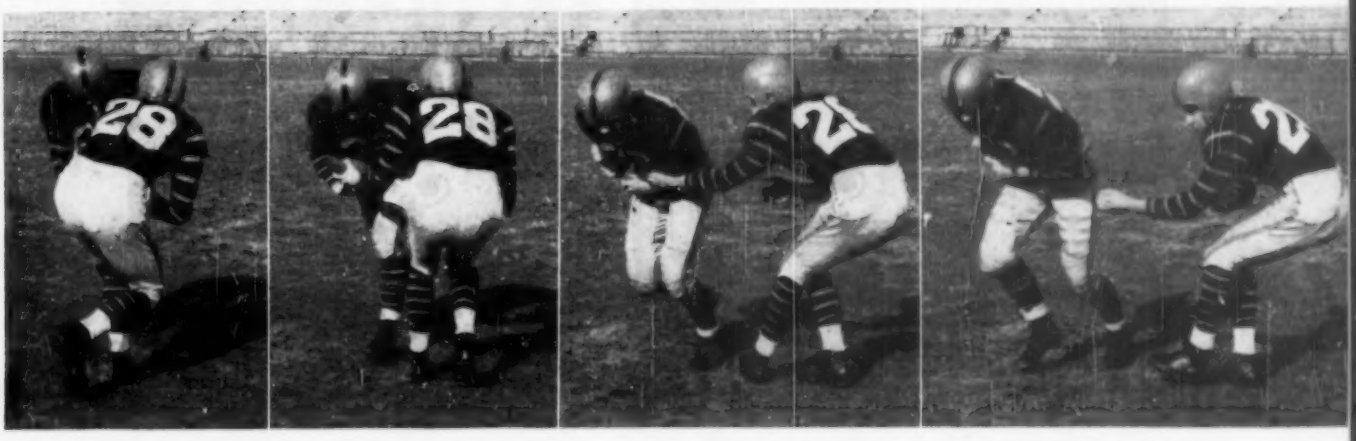
The toe of the right foot is planted with the knee depressed to the inside and toward the pivot leg. This serves as a *brake* for the initial phase of the full spin as well as a balancing factor.

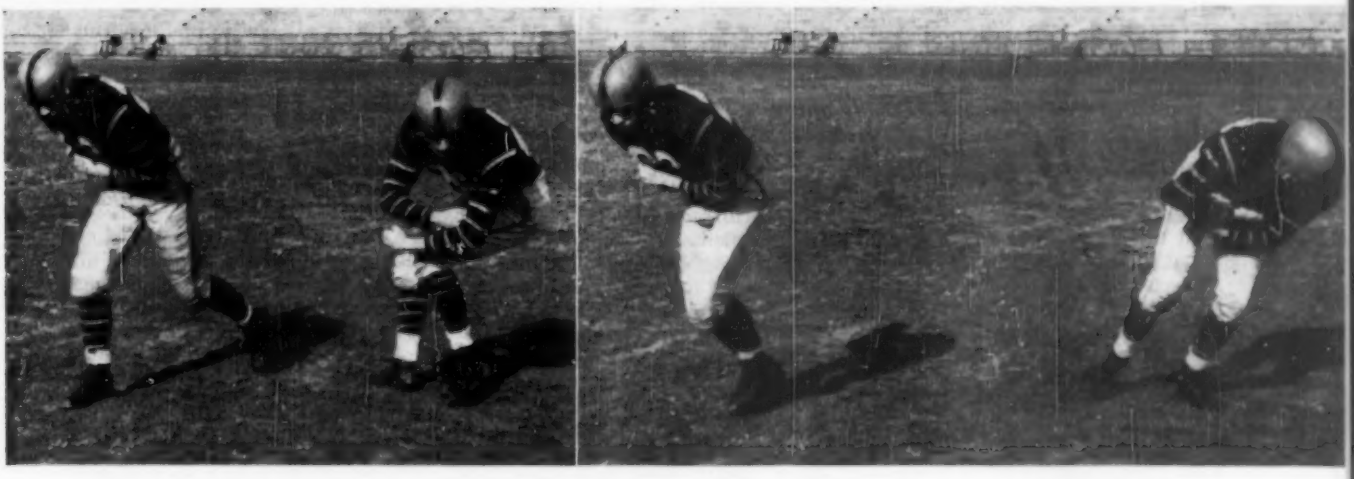
All these fundamentals are important in keeping the spinning back in good balance and preventing him from falling or pulling away from the faking back and thus disclosing daylight between the two

FAKE SPINNER FROM LEFT FORMATION

Keeping his elbows close to the sides and in front of his hips, the left half pivots on his left foot and brings his right foot around to the left and toward the line of scrimmage. The toe of the right foot is planted with the knee depressed to the inside. After handing off to the full, the half continues his spin, covering up with both hands.







backs, which destroys the deception of the hand-off or keep.

Ordinarily, if the initial fundamentals of the spin or first phase are correct, then we can be pretty well-assured that the completion of the full spin and the ultimate drive into the line with good form is inevitable.

As the ball is passed to the halfback and his pivot initiated, we find the fullback starting his action simultaneously. He steps off with a short right direction step at a point just inside the spinning back's pivot foot. This angle step brings him into a better faking position with the halfback.

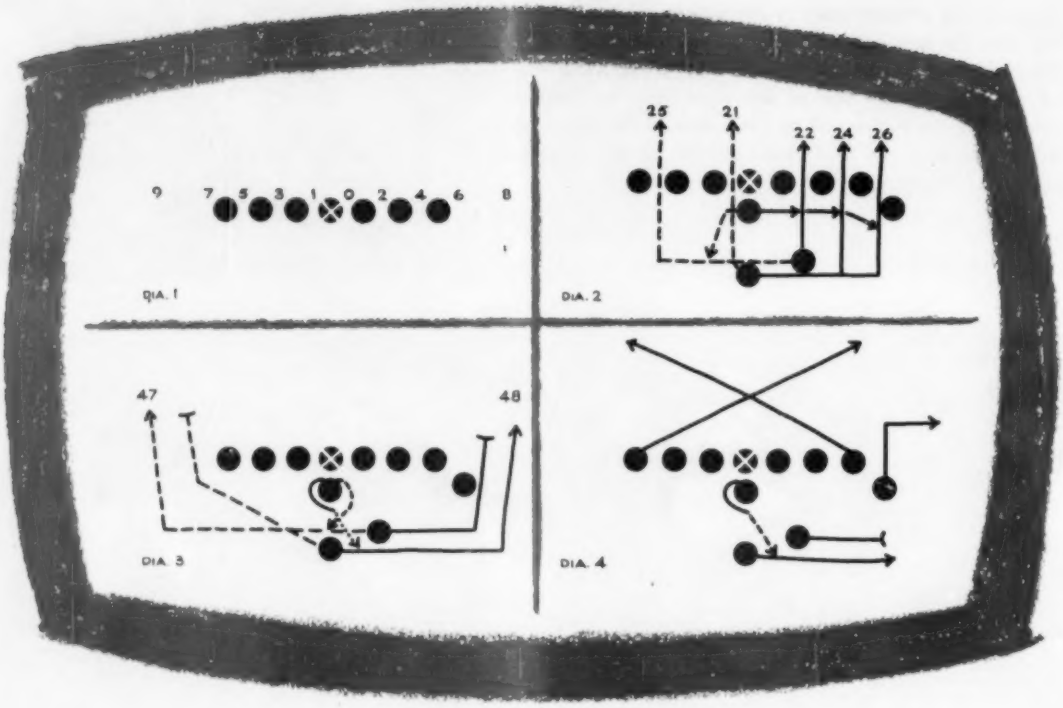
At the same time he steps with his right foot, he pivots to the right on the left foot, bringing his left elbow up high enough to place the back of the left hand under the chin, thereby creating a good pocket for the reception of the ball or the fake. The right hand is placed just inside the right hip with the palm facing in and serves as the posterior part of the ball pocket.

This action of the fullback is one complete movement with the body posture maintained at its original vertical level. At this particular instant, the body posture of both backs should be at the same vertical level, thus affording excellent position for faking the ball and keeping it from the view of the defense on the short side.

The next immediate move for the fullback is to step quickly with the left foot (second step) to a point slightly to the rear of the halfback's pivot or left foot. Just as he initiates this step, the ball is placed in the pocket by the halfback.

The fullback quickly comes over the ball by dropping his left shoulder, pivoting the trunk to the right, and at the same time bringing the left hand, arm, and elbow over the ball with the right hand assisting from underneath. This brings the

(Continued on page 66)



Multiple Simplicity

ALTHOUGH multiple offenses are gaining popularity in college football, high school men tend to shy away from them. They feel it's too difficult to teach the average schoolboy player more than one formation and that the time spent in adding formations can be better utilized in perfecting one formation.

Our feeling is that a multiple offense may be so simplified as to require no more teaching time to perfect than a single formation. And when the complexity is removed from a multiple offense, it may become the ideal offense for many high school football teams.

The Porterville H. S. B team was forced into a multiple offense by necessity. Being a feeder to our varsity, we were expected to run the varsity's wing T formation. But our material was too small and too slow for a sustained effort from the wing T. So we decided that the only way we could compensate for our offensive weaknesses was to add several different formations which could more efficiently utilize our players' skills and talents while minimizing our weaknesses.

In utilizing our players' individual talents, we found it necessary to change personnel every time we changed formations. In the passing formations we used our best passer at tailback, the best pass receivers at ends and wingbacks, and our biggest linemen as pass protectors.

The best runners and blockers were inserted for the running game. As a result, we didn't vary the formations by play but according to the location of the ball on the field.

We also felt that the use of several formations would add an element of confusion to opposing defensive adjustments; would force our future opponents to spend more time preparing defenses to meet all of our offenses, thus neglecting their offensive game; and would give us a better opportunity to find a scoring combination should one of our several formations fail during a game.

In devising a multiple offense, we agreed on the principle of simplicity for all phases of the formations. This principle was followed by varying the line blocking as little as possible and making it the same in most instances, by running the backs in the same or similar patterns in all formations, and by using the most elementary pass patterns.

All of our formations were run with a balanced line and tight line spacing, except when one or both ends split in spreads. On the wing T, the tailback lined up three and a half yards behind the center, while the fullback set up three yards behind the line splitting the inside leg of the right tackle. On all other formations, the tailback and fullback dropped back an additional yard and the fullback moved directly behind the right guard.

All our running plays were numbered to correspond with the hole in the line the backs would hit. From center out, even holes were run to the right and odd holes to the left. The tailback ran the even holes, with the exception of a hand-off or buck into the 1 hole, and the fullback ran the odd holes with the exception of a hand-off or buck into the 2 hole. See **Diag. 1** for hole numbering.

Line blocking for runs was by rule—man on or nearest uncovered man to the hole. The ends and wingbacks blocked the same as the interior line on plays to their side, but

By **WILLIAM H. HATCH,** *Porterville (Calif.) High School*

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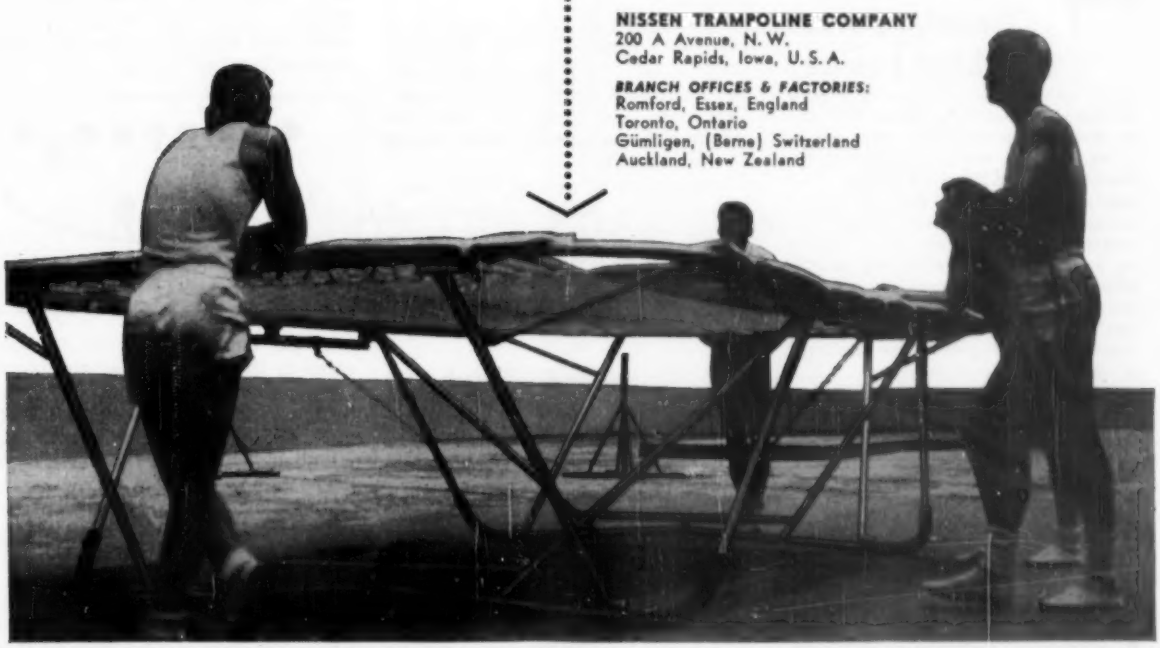


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became downfield blockers on plays away from them.

The basic formation we used was the wing T. Any time we moved inside the 20 we generally went into this formation. We felt it furnished more scoring power from short distances, as the backs could hit the holes more quickly on hand-offs than on bucks and our line wouldn't have to sustain their blocks. We also had the advantage of a quarterback sneak when short yardage was needed.

The major disadvantage of this formation outside of the 20 was that, as we had no breakaway runner, our small line couldn't take the continual pounding necessary to grind out the yardage. We ran two series from the wing T—a hand-off series and a power series.

Diag. 2 shows the basic patterns for the hand-offs—our 20 series. The solid lines indicate the patterns to the strong side, while the broken lines indicate the patterns to the weak side.

Diag. 3 illustrates the power series—our 40 series. The solid lines show the power pattern to the strong side, tailback carrying and fullback leading, while the broken lines illustrate the weak-side pattern, the fullback carrying and tailback leading.

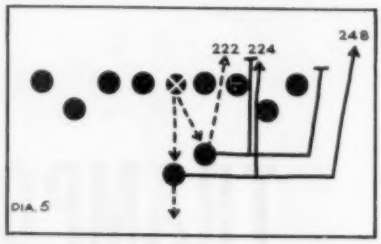
We had one pass pattern from the wing T, the 48 pass, so named because it began with the same backfield pattern as the 48 run. This pattern proved so effective that it was incorporated into all our formations.

In the 48 pass, **Diag. 4,** the ends crossed 10 yards out while the wingback went down three yards and cut at right angles to the outside. The right end crossing from the strong side was the primary target of the tailback.

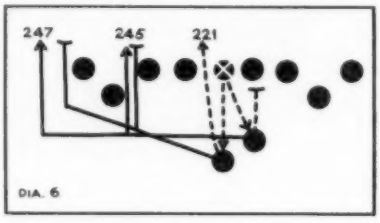
The second formation in our multiple offense was a conventional spread referred to as the 200 formation. In this formation, the ends split five yards and the wingbacks split the difference between end and tackle one yard back from the line.

Though this was primarily a passing formation, we ran much the same running patterns from it as from the wing T. Running plays were numbered the same as in the wing T, except that they were prefixed with the number 200 and the hand-off series became the buck series in the 200 formation.

Interior line blocking on runs was by rule, as was the wingback blocking—man on or nearest *linebacker* to the hole if the play was to the wingback's side or downfield blocking if the play was away. End blocking was man on or nearest man to the *outside* on plays to the end's side or downfield blocking on plays to the opposite side.

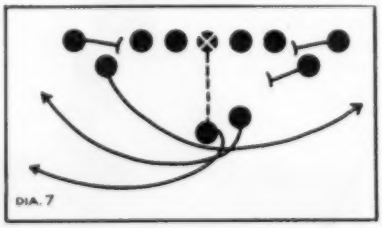


Diag. 5 shows the running pattern of the tailback carrying and the fullback leading to the right (solid lines) and a fullback buck (broken line). Notice the pattern of the tailback on the fullback buck—backing up and faking a pass.



Diag. 6 illustrates the running pattern to the left. The solid line is the fullback power pattern with the tailback leading, while the broken line is the tailback buck.

For added deception to the running game, a spinner series was devised for this formation. The plays were called 200 spinner keep, 200 spinner give, and 200 spinner reverse. See **Diag. 7** for the backfield pattern for this series.



In the back pattern, the tailback spins to the right and either hands off (spinner give) or fakes to the fullback. If he fakes to the fullback, he either hands off to the wingback (spinner reverse) or keeps (spinner keep), following the fullback around end. If he hands off to the fullback, he fakes to the wingback and follows the fullback for a possible lateral.

For the spinner series, interior line blocking was as for pass protection while the ends came across to take the first defensive man crashing off

(Continued on page 80)



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100-Yd. Dash	9.3	Evanston, Ill.	5/14/55	440-Yd. Run	46.6	Berkeley, Calif.	6/ 5/48	2-M Relay	7:22.7	L. A. Relays	5/24/57
100-Yd. Dash	9.3	Fresno, Calif.	5/12/56	440-Yd. Run	45.8	Modesto, Calif.	5/26/56	880-Relay	1.22.7	Texas Relays	4/ 4/57
100-Yd. Dash	9.3	Durham, N. C.	5/ 5/56	120-Yd. H.H.	13.5	Fresno, Calif.	5/15/50	440-Relay	39.9	Kansas Relays	4/20/57
100-Yd. Dash	9.3	Texas Relays	4/ 6/57	220-Yd. L.H.	22.2	Durham, N. C.	5/ 5/56	440-Relay	39.9	W. C. Relays	5/11/57
100-Yd. Dash	9.4	Abilene, Tex.	4/27/57	220-Yd. L.H.	22.3	Salt Lake City	6/21/47	100-Meter Dash	10.3	U.S.A.-U.S.S.R.	7/19/58
220-Yd. Dash	20.0	Sanger, Calif.	6/ 9/55	400-Meter H.	49.5	Los Angeles	6/29/56	200-Meter Dash	20.7	U.S.A.-U.S.S.R.	7/20/58
220-Yd. Dash	20.2	Los Angeles	5/ 7/49	110-Meter H	13.4	Bakersfield, Calif.	6/22/56	400-Meter H.	50.5	U.S.A.-U.S.S.R.	7/20/58

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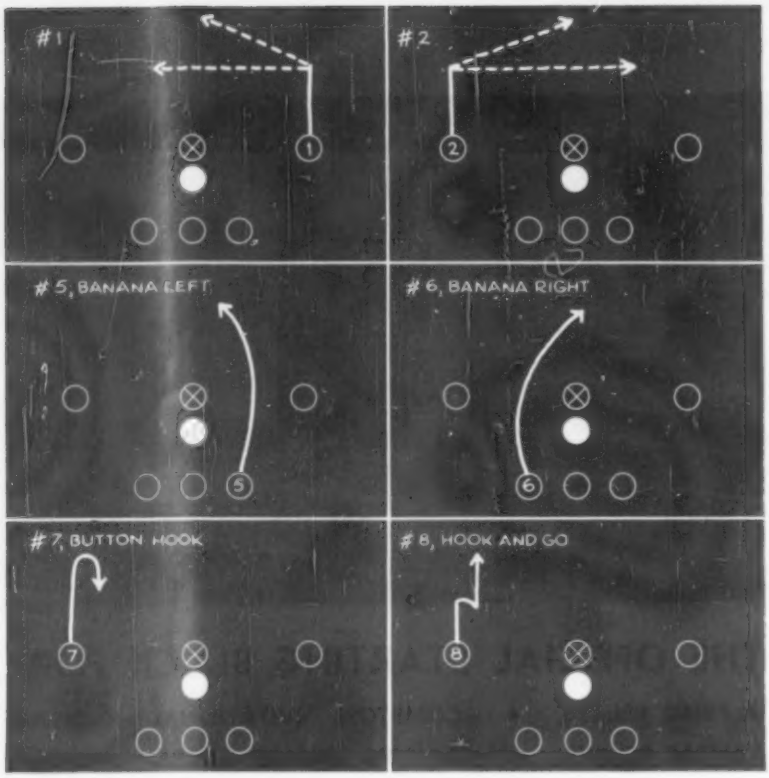
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By FRANK GAGLIARDI

Backfield Coach, Cheshire (Conn.) Academy

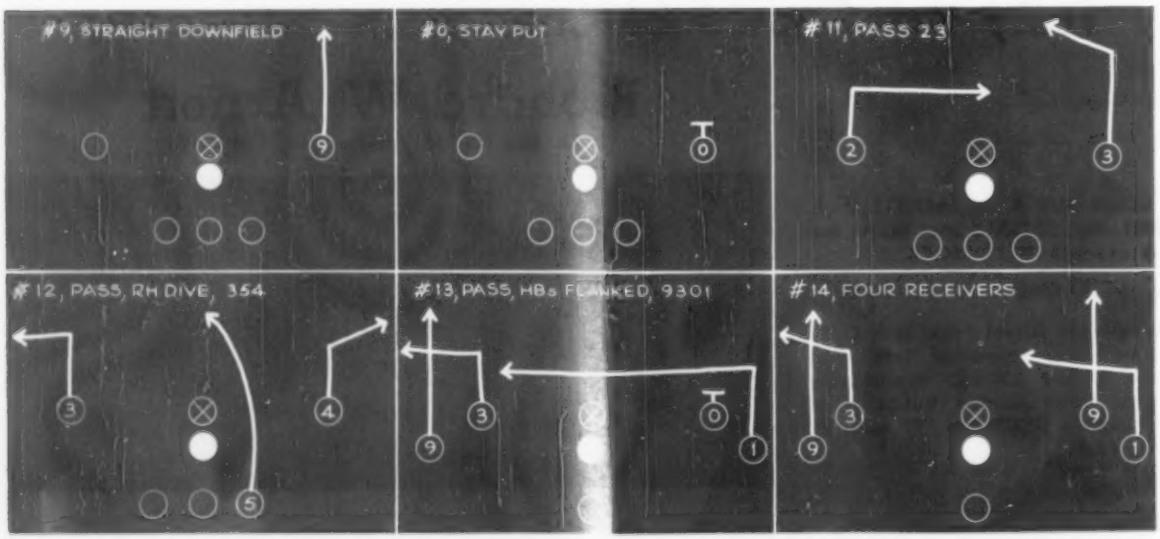
FOOTBALL players have to rely a great deal on rote memorization in order to keep up with the ever-growing complexities of offensive and defensive formations. They must learn the variations of their opponents' offensive and defensive plays along with those of their own system.

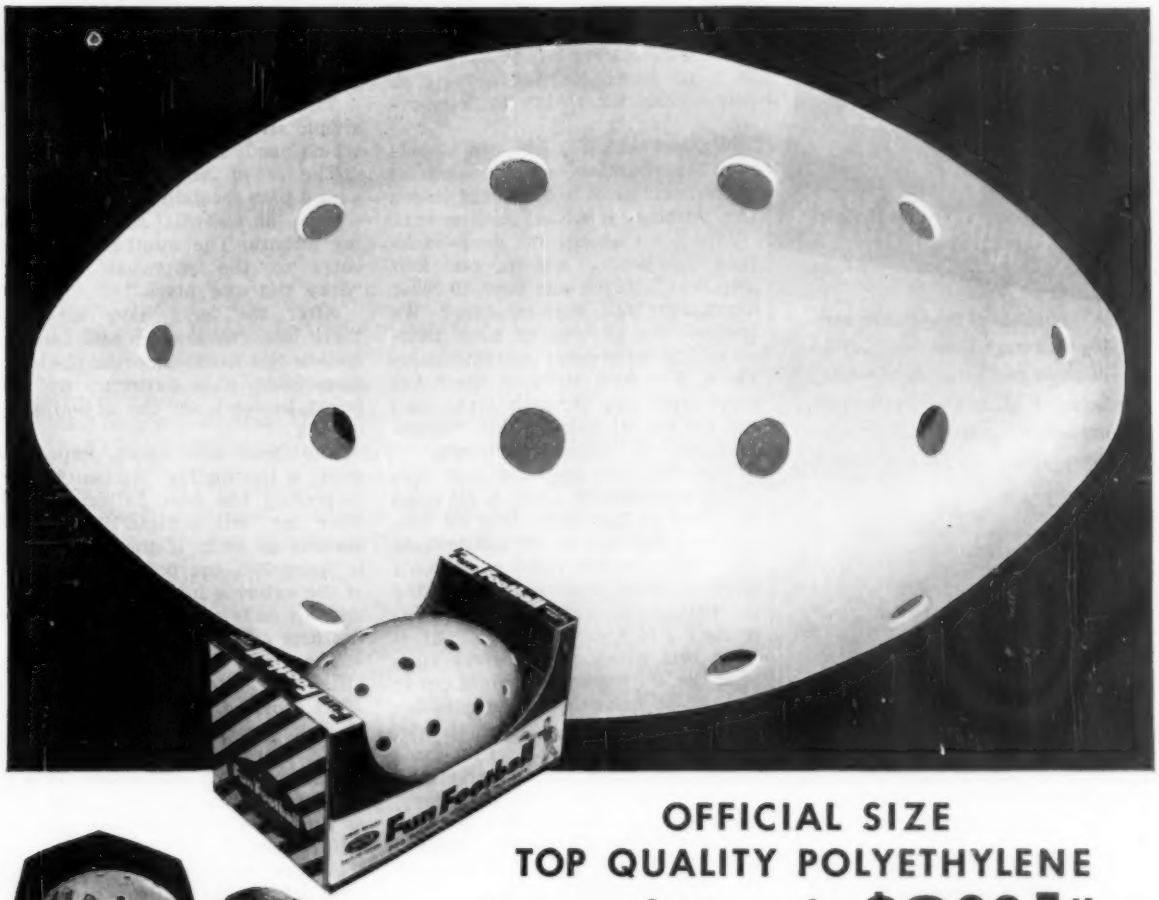
Coaches feel the more they can get their boys to "understand," rather than memorize their system, the closer they are to solving the problem of missed assignments. Hence, the more time they can spend on other phases of the game.

Every good offensive team combines the running and the passing game. In order to simplify our passing game, we use a system for *drop-back passes* which gives our boys an understanding of the play which is called. (Passes off our running game retain the same name or number as the running play; a "32 drive", for example, would become a "32 drive pass". This gives more meaning to the pass play.)

We've noticed from past experience that many ball games have been lost due to faulty execution of pass pattern assignments. I believe the reason lies in the fact that most pass plays are mere numbers which give the receivers nothing with which these numbers can be associated.

For example, on "82 pass", the left end might buttonhook; on "77 pass", he might go downfield 10 yards and cross over the middle, and





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on "94 pass", he might stay in and block. What association does this end have between the numbers called and the maneuver he's to carry out? In most cases, he has nothing to rely on but his ability to "memorize."

We feel that if a boy can associate this number with something made familiar to him, we can lessen this problem of missed assignments.

When we set up our drop-back-pass numbering system, our first step was to teach our boys 10 basic maneuvers for pass receivers. We limited the system to nine pass-receiving maneuvers and the pass-block. The first eight of these are numbered one through eight and are set up in pairs called "sister-patterns" or "sister maneuvers."

The first two passes of our system are numbered 1 and 2. (It must be noted at this point that all maneuvers that end to the left are odd and those to the right are even.) Both of these maneuvers take the potential receiver downfield approximately 5 to 7 yards.

At this point, the receiver running the #1 maneuver would cut to the left at an angle falling between 45 and 90°. If #2 is called, the cut would be to the right using the same angle. We allow our receivers to find their openings in the secondary, but they must stay within the area specified. (The potential receiver varies the angle of his cut in order to avoid a defender.)

Numbers 3 and 4 of this system are basically the same as #1 and #2. The only difference is that the receiver runs a deeper downfield maneuver before cutting. In both of these maneuvers, the end or back runs 10 to 12 yards before making his cut left or right, depending on the call.

Sister-patterns #5 and #6 are the "banana" left and "banana" right maneuvers. The receiver "bows" to the left or right, again depending on the call, and the middle of the bow should be 8 or 10 yards from the line of scrimmage.

The next combination includes the old reliable buttonhook pass in the #7 spot, and the #8 in the "hook and go" pass maneuver. The receiver carrying out #7 runs downfield 6 to 8 yards, stops and pivots. We prefer the boys to pivot to the inside. But in order to avoid a defensive man the outside pivot is acceptable, taking one step back toward the passer as he makes his turn.

The sister-pattern of #7 is the "hook and go", which is #8 in the system. Here we find the end or back moving downfield the same 6 to 8 yards. In this case, however, he hooks (without taking a step toward the passer as indicated in #7), holds for a one-count, and then continues downfield as illustrated in #8.

The last pass maneuver, #9, is the simple straight downfield maneuver which needs no explanation.

The last of the numbering system isn't a pass receiving maneuver, but it plays an essential role in a passing offense. The number "0" indicates to the potential receiver: *"Stay put and block."*

After the boys have mastered these basic maneuvers and can associate the numbers with the corresponding pass patterns, we can begin to work on the actual play calling.

The first and most important point is the method we use for interpreting the pass pattern called. Here the "left to right" method of reading is used. If the play called is "pass 23", the potential receiver at the extreme left (in this case it's the left end) runs the maneuver of the first number called.

The left end's assignment is: "Run the #2 maneuver." This is a short crossing pattern to the right, as indicated in #2. The next potential receiver is the right end, and he runs the #3 maneuver. This is a deep, crossing pattern to the left as shown in #3. The pass play itself is seen in #11.

At this time, note the procedure used in calling a drop-back-pass. First, the signal caller calls, "Pass", and then indicates the number of the pass play. This not only eliminates confusion between running and passing plays, but also alerts the potential receivers to the fact that one of the numbers following will indicate their individual maneuvers.

After having designated the pass, the signal caller may also assign a back to flank, dive, or go in motion, or an end to split. Should these movements be unnecessary to the pass play, only two numbers are given. The first number is the left end's assignment; the second number is the assignment of the right end.

A two-number pass play, "Pass 23" is illustrated in #11. A back is involved in the pass pattern only if three or more numbers are called (unless he's given a flare assignment).

If a third receiver is necessary, the play is called in this manner: "Pass, right half dive, 354." In this case, the right halfback runs the maneuver of the second number in the call, and the right end's assignment is the third number as shown in #12.

(Continued on page 86)

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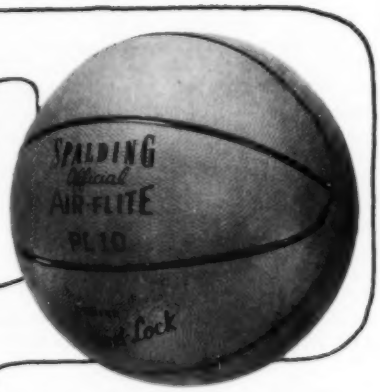
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By CARL SELIN
University of California at Riverside

The Jump Pass

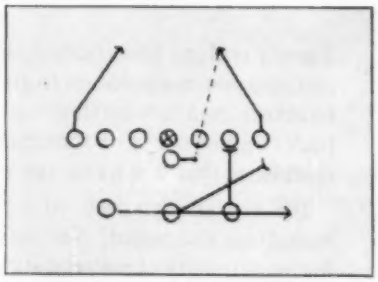
ONE of football's most spectacular weapons—the jump pass—should be included in every offense. This type of pass play has many variations that offer many advantages. It can be adapted to any style of offense. It exploits specific defensive weaknesses and prevents the defense from overloading at other key points in the attack.

The jump pass has always been a most dangerous threat. In fact, in setting our defenses for a team which uses the jump pass as an integral part of its attack, we rate the jump pass second only to the long pass as the major threat which must be stopped.

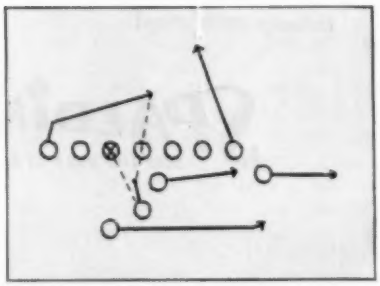
Perhaps the name "jump pass" is somewhat misleading, since this type of pass isn't necessarily thrown from a position in the air Other terms such as "quick pass," "slant-in pass," and "look-in pass" are commonly given to passes of this type, and there are a number of variations in use today.

Since we teach the passer to keep the ball as high as possible to prevent interference from the defensive linemen, it has been our experience that the easiest way to make the completion is by passing the ball at the height of the jump.

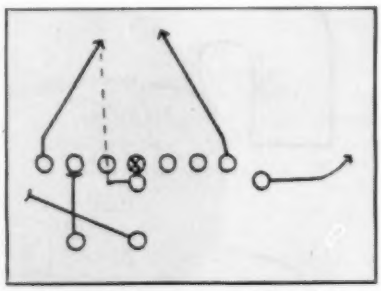
Although the jump pass is ideally suited to the T formation, it's by



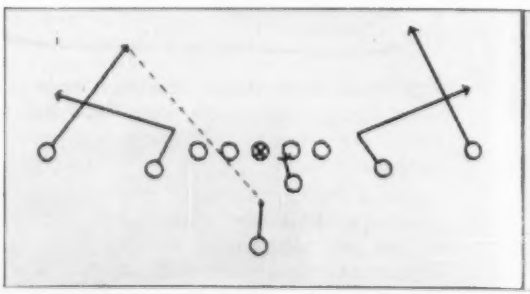
Diag. 1, Jump Pass from T



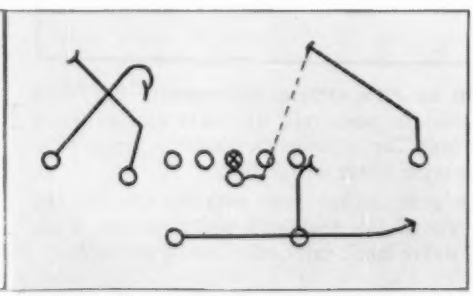
Diag. 2, Jump from Single Wing



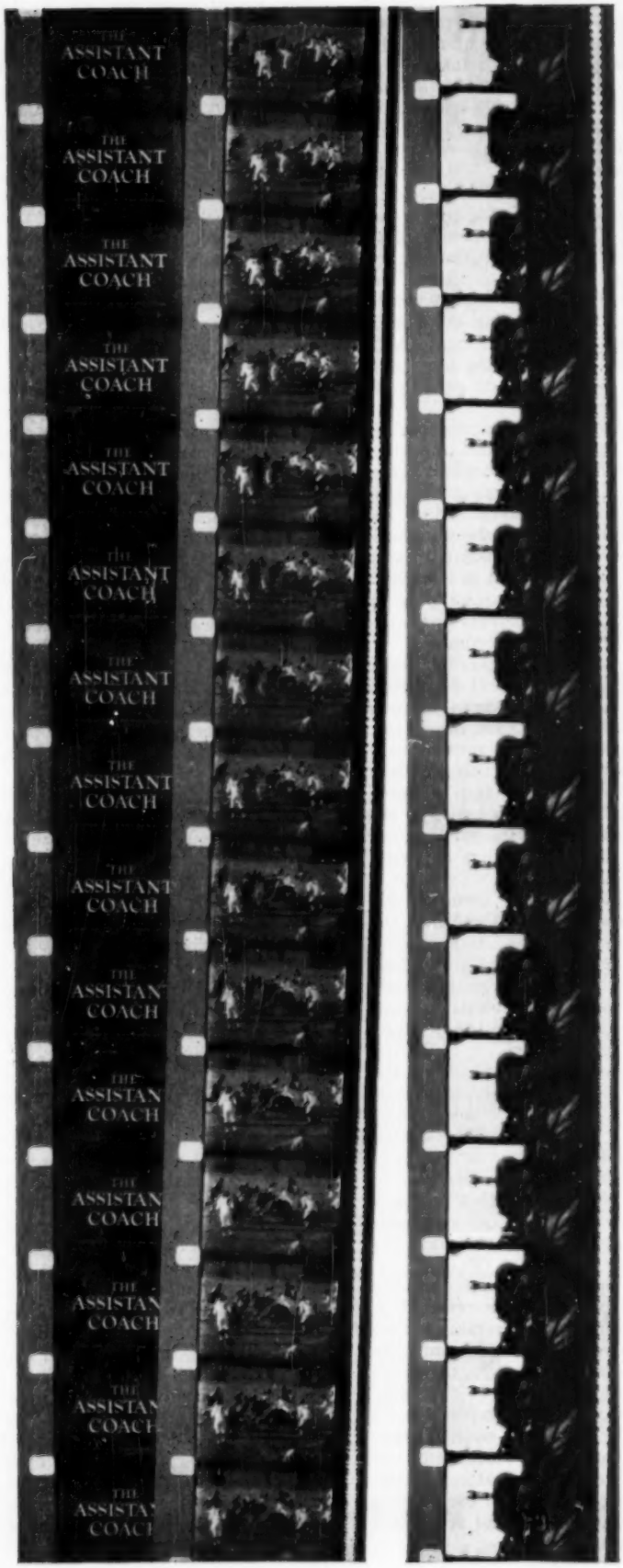
Diag. 3, Jump from Winged T



Diag. 4, Jump Pass from Spread



Diag. 5, Jump Pass from Fly T



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no means unique to this formation alone. The fullback jump pass from the single wing is one of football's oldest pass plays. After faking several steps into the line, the tailback in a single wing, double wing, short punt, or spread can use the jump pass as effectively as the T formation quarterback.

An overabundance of material isn't needed to make the jump pass effective. The interior linemen block aggressively to fake a running play, but are required only to prevent the defensive lineman or linebacker in their area from crossing the line of scrimmage. The passer may be a back who can't throw the long pass, since he needs accuracy only up to six or seven yards.

With the increasing number of defenses using eight- and nine-man lines, the jump pass should gain in popularity. Although most eight or nine man lines attempt to jam the ends and occasionally the wingback or flanker, it's very difficult to stop the jump pass—if used in combination with a basic running play or series and if the receivers are well-coached in release techniques.

After several successful jump passes, the defense will be forced to adjust to stop the passes, thereby opening other points for the attack.

The jump pass has proven very effective against teams using "jitterbug" defenses, since the blockers, though blocking aggressively, are responsible only for the man in their area and the prevention of penetration.

Many of the most common defenses today, such as the 5-4-2, the 6-3-2, and the 7-2-2, make use of corner linebackers. The jump pass is especially effective against such defenses, since the offensive ends generally have an inside position on these line backers.

If the jump pass is run from the split T, the inside linebackers cannot commit themselves too quickly, since they must be aware of the diving halfback. The corner linebacker won't be in a position to stop the jump pass. With a halfback swinging wide, his major responsibility must be to stop the wide option play.

If the optimum effectiveness of the jump pass is to be realized, it should be thrown after faking some type of dive play or buck into the line. This quick fake puts the pressure on the linebacker and may force him to commit himself with a step or two in the wrong direction. The aggressive blocking of the line and the running pattern of the backs eliminate many of the passing keys the linebackers and secondary may be using.

The essential techniques of the jump pass are relatively easy to teach. The footwork of the passer depends upon the type of backfield pattern being run.

From the T formation, the quarterback may take one step in the direction of the halfback or fullback who's faking a dive play into the line. After the step, a quick fake is made to the diving back. The timing of the fake must be coordinated with the length of time needed for the release of the potential receiver. In jumping, the passer takes off from either one or both feet and releases the ball at the height of his jump.

In formations where the ball is centered deep to the fullback or the tailback, the passer takes from one to three driving steps toward the line and then jumps to pass the ball.

The type of pass to be thrown can be varied according to the abilities of each individual passer. Some teams have had considerable success with even a two-handed pass.

Some of the recommended coaching points for the passer include: Keep the ball high, out of the reach of defensive linemen; throw to a spot in front of the face of the intended receiver; and throw the pass fairly hard, making it more difficult to intercept.

One basic rule all passers must follow is that if at the height of his jump he observes his receivers being closely covered, he must come down with the ball and make any yardage he can.

The basic jump pass patterns from the various formations are shown in **Diags. 1** through **5.** It has been our experience that a basic slant-in pattern achieves the greatest results in number of completions and yardage gained.

Occasionally we vary the pattern and the receiver cuts in more sharply. In this case, however, he's not moving in the same direction as the pass, and at short ranges the hard-thrown pass is more difficult to handle.

When playing against defenses designed to stop the jump pass, one of the major problems is getting the receivers into the clear. Either the receivers will be held up at the line of scrimmage or linebackers will be placed just inside the receiver in the probable line of flight.

To combat the defensive man playing head-on the receiver and attempting to hold him up, a number of methods can be used. Two of the simplest release methods are splitting the receiver down the line to gain more maneuverability, and

(Continued on page 84)

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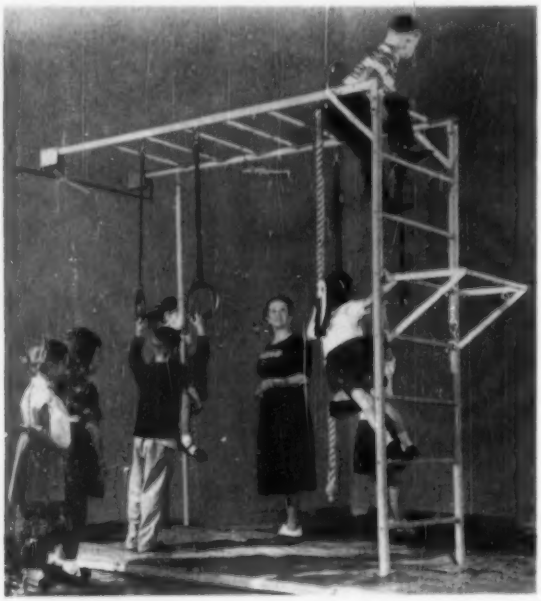
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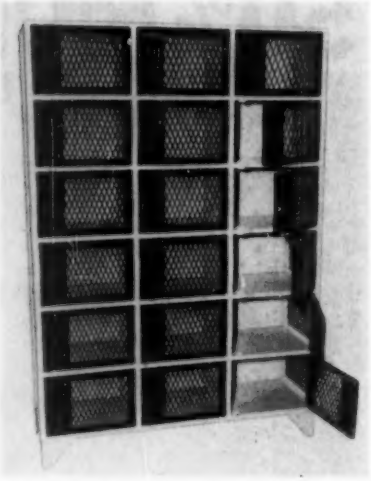
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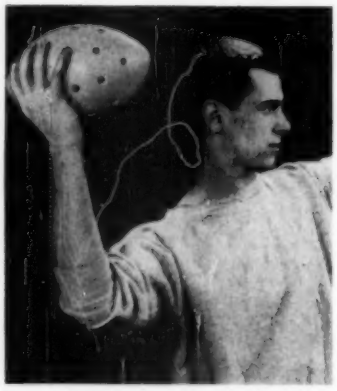
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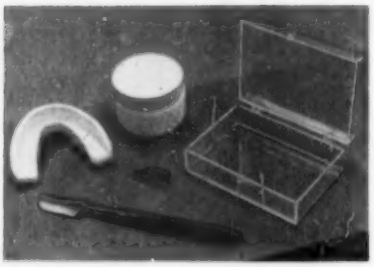
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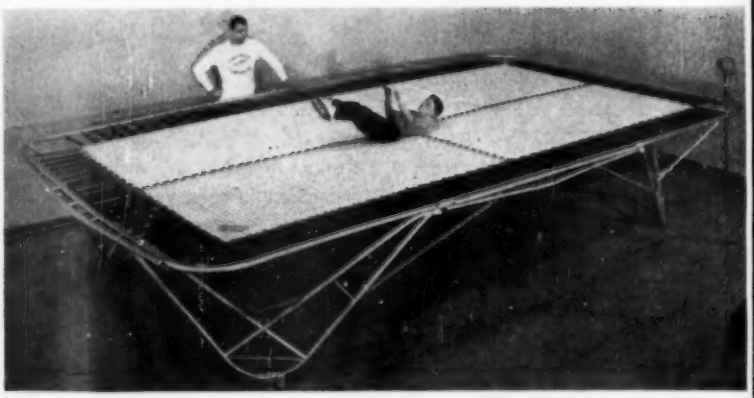
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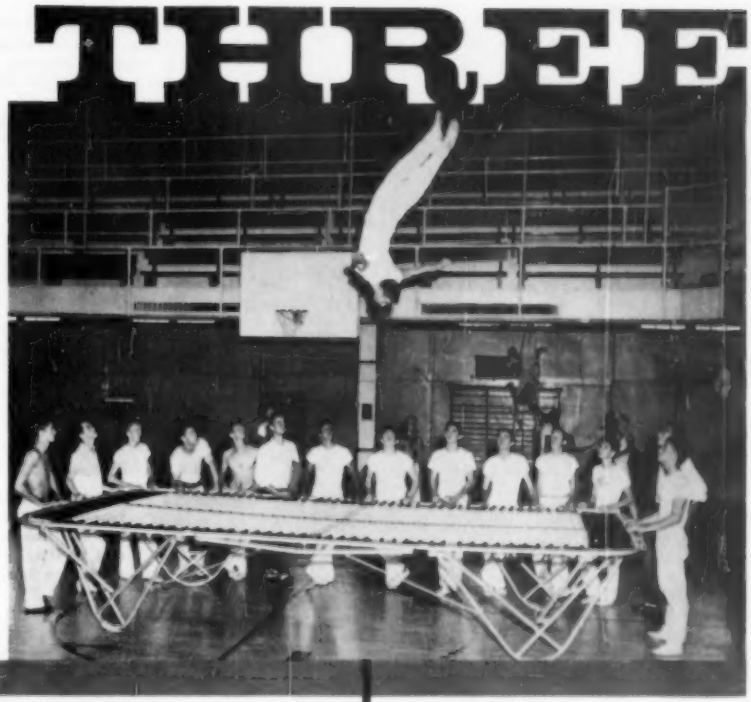


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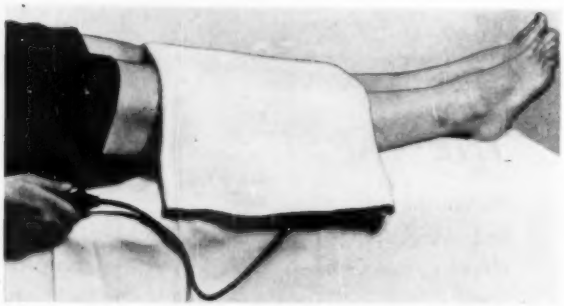
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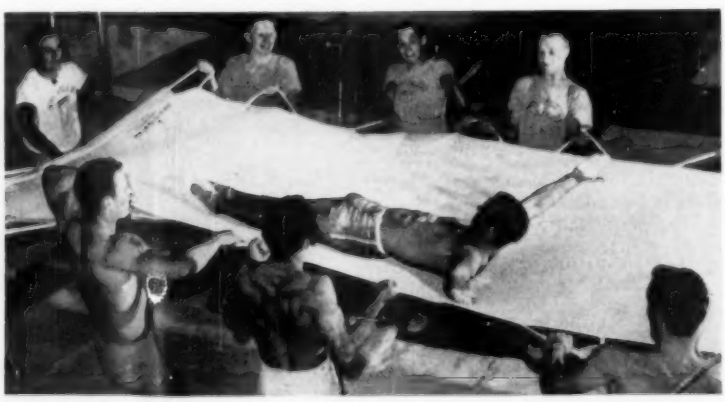
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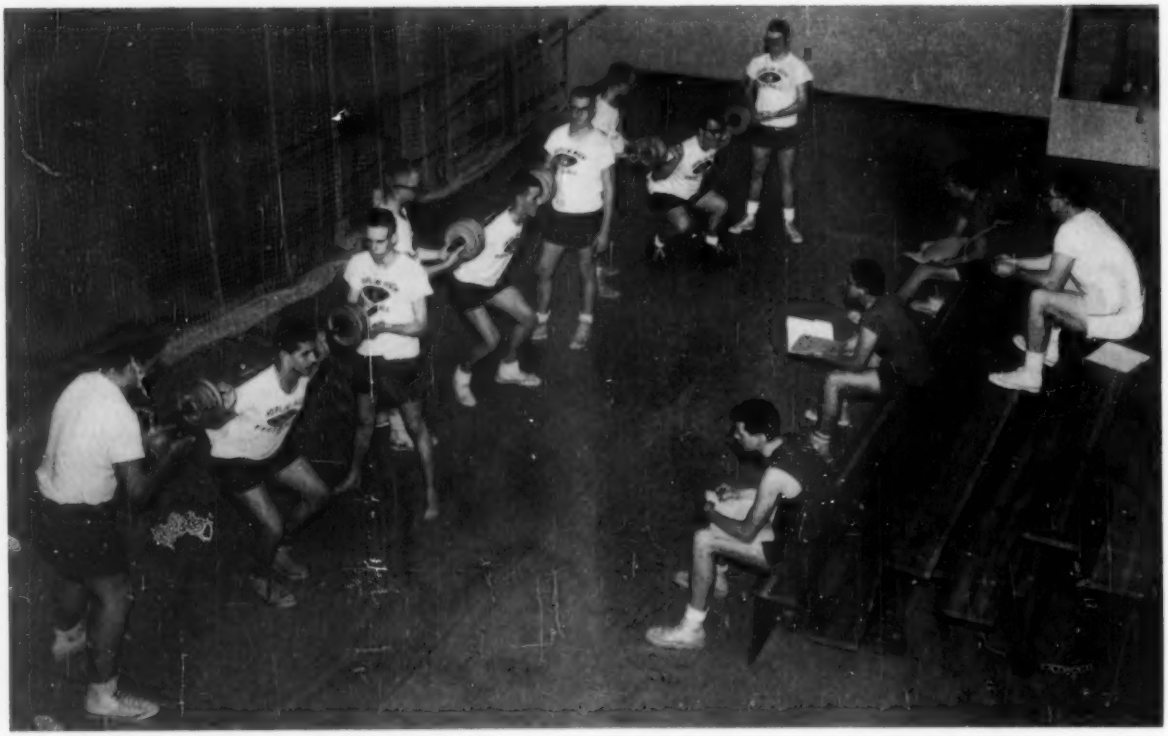
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Physical Development Program for Football Players

By FLOYD E. BELK

Senior High School, Joplin, Mo.

IN NOVEMBER 1958, Joplin High School had just completed the second losing football season in three years. It was also the second in the last 18 years.

At the annual evaluation meeting, the athletic staff arrived at the conclusion that mechanical and coaching errors weren't the only factors contributing to the unsuccessful year. It was concluded that the over-all physical development of the players left something to be desired.

In a follow-up meeting, after considerable thought and study, it was felt that two elements were involved in this poor physical development:

1. The physical fitness of our entire student body wasn't nearly what it ought to be. Our physical education program was being geared to a wide range of social and recreational type activities, and wasn't placing enough emphasis on body building and conditioning.

2. The boy's physical education program was almost nil. Only 16.5% of the enrolled males were required to participate in physical education. An R.O.T.C. unit was supplanting our physical education program.

Since item two was primarily an administrative policy, beyond our ability to change, I was assigned the task of designing a program to improve physical development within the athletic department. For purposes of clarification, the first six weeks will be called Program A, and the second six weeks Program B.

Program A. This program was designed for 30 varsity and 30 "B" team football boys, which would comprise the varsity for 1959. This group was asked to report to the gym at the athletic practice period. This period lasted only one hour—a state athletic association regulation.

The 60 boys were divided into two groups. For purposes of identification, one group was required to wear red uniforms and the second group green uniforms. Each boy was placed in a unit of six, grouped homogeneously by the Cozen Classification Chart for Boys.

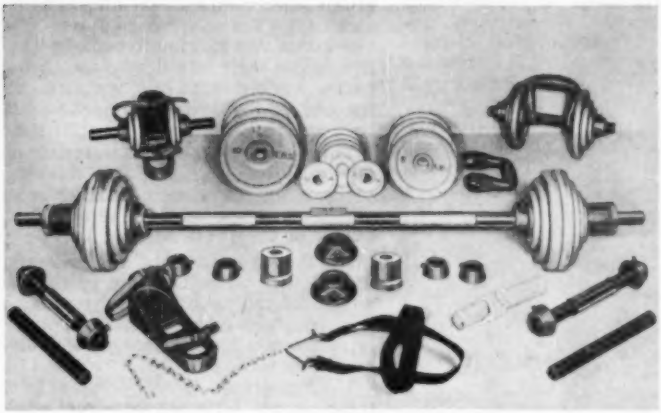
As the program began, one group worked with the weights while the other was tumbling. The following day each group reversed their activities.

It was the author's fear that excessive weight-lifting might cause "muscle-boundness," but he felt that the "off-day" tumbling would eliminate this harmful characteristic and at the same time produce good football learnings.

In order to facilitate explanation, the author will detail the activities of both the red and green groups on a given day.

Red, Weight Training. The athletes were divided into five squads of six boys each. One senior was appointed as squad leader. Basic exercises were set up for the use of barbells and

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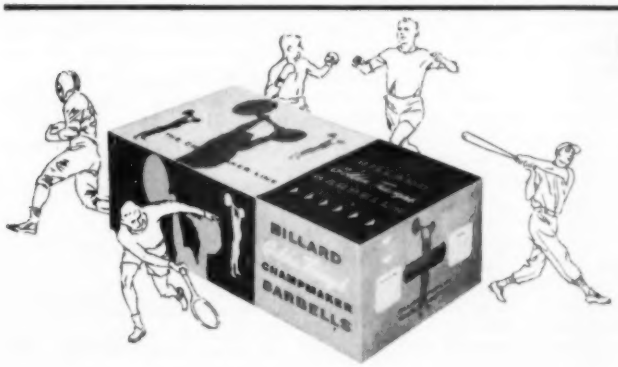


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dumbbells. These exercises were required of all boys.

Each boy was analyzed carefully for body areas that could use additional development, and certain remedial exercises were then prescribed for each. In these exercises we utilized dumbbells, wrist-rollers, headstraps, iron boots, and the jumping ropes.

Within each squad each boy would perform the required exercises, rotate, and begin his individual exercises. In this manner at the end of the 40-minute period, all the boys would have performed on all the devices.

The leader was supplied with a record folder on each boy, and it was his responsibility to record the activities of his squad.

Repetition was emphasized. In the beginning all basic exercises with the barbells were performed with 50 pounds of weight, while all basic exercises with the dumbbells were performed with 10 pounds. But for every exercise, a weight was used which could be handled at least 10 times *without strain.*

After two weeks, when the muscles began to strengthen and the weight could be handled 15 times, 10 pounds were added and greater effort was put forth *with strain.* After the next two weeks, an additional 10 pounds were added, making a total of 70 pounds.

This is called the progressive system, and was to be maintained throughout the program. The alternating days of tumbling were to allow for muscle recuperation and build-up.

Time was a limiting factor. Basic exercises were chosen that would allow us to concentrate on larger muscle groups and a greater number of muscles. The basic exercises were as follows:

Barbells: Warm-up, Press, Deep Knee Bend, Jumping Jack, Dead Lift (stiff-legged), Toe Raises, Dead Lift (bent-legged).

Dumbbells: Lateral Raise, Deep Breathing.

Green, Tumbling Program. The tumbling program didn't deviate a great deal from the regular high school tumbling unit. In this program we were able to incorporate the use of a chinning bar and the climbing ropes to supplement the weight-lifting program.

"Staleness" had been anticipated in such regimented procedures. But this became a greater factor than had been realized. During this program we added periodic games, films, tests, and even group walks.

Program B. After six weeks with the above routine, the athletic staff questioned the progress being made. A motor ability test was given 10 boys chosen at random and these results verified our fears.

By the sixth week, I had an opportunity to make a more comprehensive study of weight-lifting. Influenced greatly by articles written by Dr. Eric L. Hughes[1] and Donald W. Fluke[2], our program was modified.

We didn't completely abandon the progressive system, but a new program was developed around the "over-load principle." The essential theme of this principle is that a muscle doesn't increase in strength unless it's worked to near maximum capacity.

The boys were regrouped by football position—line and backs. Each group was required to lift weights each day. The class period was divided into two 25-minute periods. The line began their tumbling class as the backs worked with the weights. At the end of the 25-minute period, the two groups reversed their activities.

Thus time became a tremendous factor with the weights. The number of basic exercises were reduced and one new one was added. The remedial exercises were retained.

At the beginning of the seventh week, the barbells were given a weight of 130 pounds. Since the dangers involved increases proportionally as the weight increases, two safety measures were installed:

1. The groups were divided into three squads, with one boy from each squad performing his basic exercises *in front of the coach.*

2. Two "spotters" were placed on each side of the barbell to catch it in case the boy would weaken.

Records were still kept on the performance of each individual.

Ten pounds were added at the beginning of each two-week period, so that during the last two weeks we were performing with 150 pounds. The basic exercises under *Program B* were:

Exercise	7-8 Week	9-10 Week	11-12 Week
Deep-Knee Bend	130#	140#	150#
Jumping Jack	130#	140#	150#
Dead-Lift (stiff-legged)	130#	140#	150#
Toe Raises	130#	140#	150#
Press	90#	90#	90#
Curl	90#	90#	90#

Evaluation. In order to evaluate the success or failure of the program, some type of measurement was desirable. The attainment of the objectives of an activity should be the basis of the testing program. But after extensive research, the author concluded that no test is available to measure general football ability.

However, most motor ability tests have events that can test concomitant football skills. So, though knowing full well the inaccuracy of this measuring instrument, we added one motor ability test as a part of the evaluation program.

The following motor ability tests were considered:

1. The California Physical Performance Test.

2. The A.A.H.P.E.R. Youth Fitness Test.

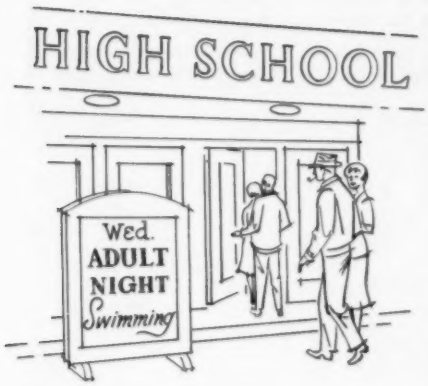
3. The National Y.M.C.A. Athletic Achievement Test.

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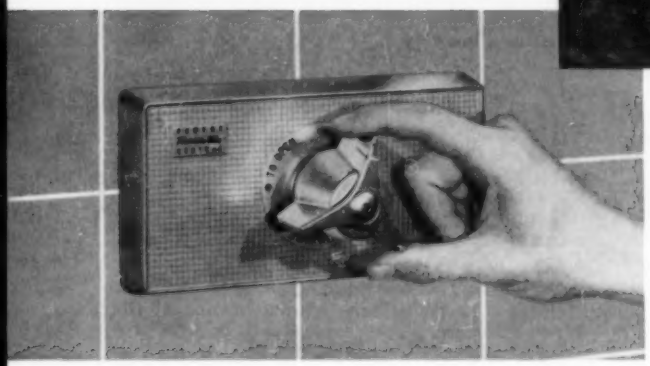
[1] Hughes, Eric L., "Standardized Weight Training Performance Test", *Athletic Journal*, October, 1958.

[2] Fluke, Donald W., "Training with Weights", *Scholastic Coach*, October, 1957.

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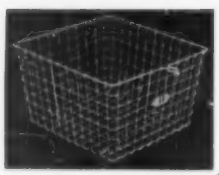
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RESULTS FROM NATIONAL YMCA ACHIEVEMENT TESTS

Event	December Average	March Average	% Gain
Pull-Up	5¼ repetitions	9 repetitions	56%
Potato Race	23.42 seconds	21.29 seconds	10%
Standing Broad Jump	6 ft. 1¼ in.	7 ft. 4½ in.	21%
Target Throw	63 points	71½ points	12%
Running High Jump	4 ft. 3 in.	4 ft. 5 in.	4%
Hop-Step & Jump	19 ft. 8 in.	20 ft. 4 in.	.03%
Push-Ups	39 repetitions	41 repetitions	.05%

The following events are part of the above test, but due to inadequate facilities, we were unable to use them: Basketball Throw, Rope Climb, and Bar Vault.

The National Y.M.C.A. Athletic Achievement Test was chosen not because of any deficiencies or inadequacies in the other two, but primarily because it scores each event on a scale from 1 to 100.

For our purposes, I felt that this grading was superior to a grading of superior, excellent, good, satisfactory, fair, and poor. With numerical scoring we received the tremendous advantage of the motivation factor in competition within each event.

This test was given at the beginning of the program in December and also at the end of the program in March. The accompanying table indicates the results.

It will be noted that in each event there was improvement, with some events gaining more than others. Also note that a small percentage of gain doesn't necessarily indicate a lack of progress. For example, the .05% gain in the Push-Ups becomes remarkable when one views the total number of repetitions.

The relatively small percentage of gain in the Hop-Step-Jump is understandable in that we didn't practice any of these test events. There's probably a coordination involved in the Hop-Step-Jump that requires practice before progress can be made.

The reduction of two seconds from the Potato Race (agility run) is truly a fine accomplishment, and the large percentage of gain in the Pull-Ups, Standing Broad Jump, and Target Throw indicates a definite deficiency within the athletes prior to the program.

These results speak well of the tumbling program. Progress in five of the seven events involved must be attributed to the tumbling program. But the 56% increase in the Pull-Ups must have been the result of the weight-lifting program.

While considering the evaluation program, it was thought desirable to know the change in physical conditioning of the athletes. A circulatory-respiratory test was chosen because the functional organic status of the body relates to the strength and endurance of the heart and the efficiency of the circulatory-respiratory system.

The Harvard Step Test was chosen primarily due to the ease of administration. The results of this test were as follows:

Backs: From a score of 105.53 in December to 102.13 in March.

Line: From a score of 100.26 in December to 101.95 in March.

All: From 102.59 in December to 102.03 in March.

The norms for this test are as follows: Below 55, poor physical condition; from 55-64, low average; from 65-79, high average; from 80-89, good; above 90, excellent.

These results indicate that the program didn't materially reduce physical conditioning. The average athlete entered the program in excellent physical condition and left the program in the same excellent condition.

With athletic ability being equal, what football coach wouldn't select the larger over the smaller boy? Our program did a remarkable job of increasing the average weight of the athletes. It jumped from 158.47 in December to 170.32 in March, with the average weight gain being 11.85 pounds!

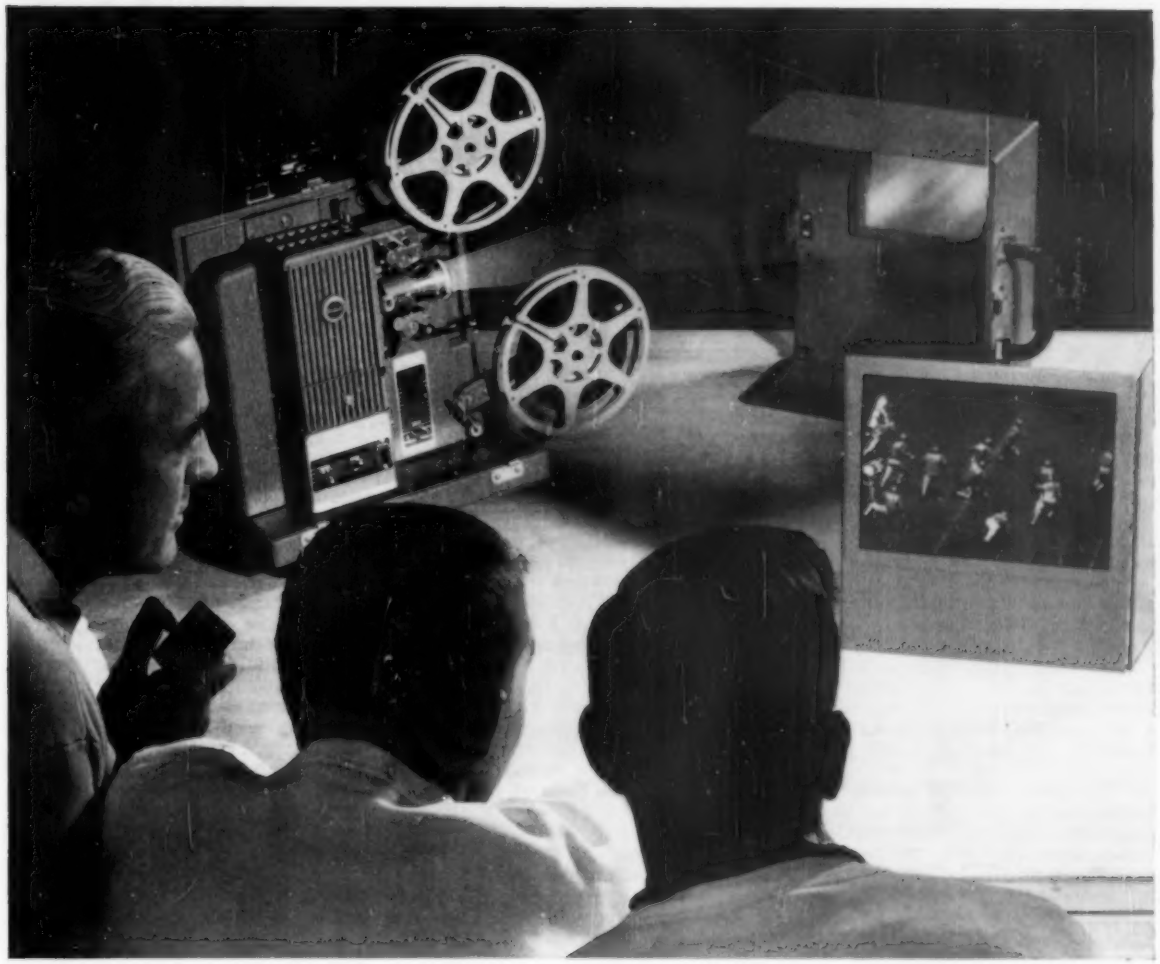
The weight gain of approximately 12 pounds per athlete is one of the most significant factors in our program. From observation of the increase in their muscle size, the weight gain must be attributed to the weight-lifting program.

Conclusion: It's the belief of the author:

1. That the over-all athletic ability improved,
2. with a gain of approximately 12 pounds per athlete,
3. and with no noticeable reduction of physical fitness.

Limiting Factors:

1. It's my belief that Program "A" wasn't a total loss. In the construction of the program for this year, an introductory period will be provided. However, six weeks is too long.
2. In such a regimented program, motivation is a tremendous factor that cannot be over-emphasized.
3. Even though the program seems to be a success, one should realize its limitations. Strength and endurance are fine characteristics in an athlete. But without "desire" and the "will to win" the athletic program won't be materially aided. I don't believe any program can instill "desire" within the athlete.



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By **WILLIAM HEUSNER**
Coach, University of Minnesota

Respiratory Physiology in Competitive Swimming

THE respiratory metabolism of the highly trained athlete differs considerably from that of the so-called average person during exercise.

Oxygen debt is one of the major limiting factors in "all-out" exercise.

1. Oxygen debt may be thought of as the energy previously stored in the body which is used during exercise. After the cessation of activity the energy storage levels must be replenished if the body is to recover or return to its normal resting state. This can be accomplished only by an elevated intake of oxygen.

2. If a man swims 50 yards without taking any breaths, it's obvious he's expending energy, yet he's not taking in any oxygen during the exercise. Therefore, he must be using previously stored energy.

3. The most apparent proof of the existence of oxygen debt is the heavy breathing or panting which regularly follows strenuous activity. The subject may be said to be "paying back" the oxygen debt which he ran up during the activity.

4. Although the technique of measuring oxygen debt is somewhat complicated, the theory is very simple.

A subject's normal rate of oxygen consumption is determined at rest prior to exercise. In addition, his normal respiration rate, heart rate, blood pressures, and other physiological values are recorded.

The subject then performs some given activity.

Immediately after the cessation of the work, the subject's oxygen consumption is again measured. This determination is continued over a ten-to thirty-minute period—until the subject's respiration rate, heart rate, blood pressures and other physiological variables have all returned to normal, indicating full recovery after the exercise.

Then a computation is made of the amount of oxygen that the subject would have used in a similar period of time had he remained at rest.

The subject's oxygen debt for the given activity is the amount of oxygen actually used during the recovery period minus the amount that he would have used during that time had he remained at rest. That is, the amount which he pays back is measured and is referred to as his oxygen debt for that exercise.

5. A tolerance for oxygen debt can be conditioned through proper training.

The average person can endure an oxygen debt of only 7 to 9 liters before complete exhaustion occurs.

Oxygen debt capacities in some highly trained athletes have been found to be as high as 18 to 22 liters.

6. During extremely severe exercise, a maximal oxygen debt may be built up in the relatively short time of 30 to 45 seconds. (This range of time was determined in subjects running on a treadmill where breathing is comparatively unrestricted. In swimming, water hinders breathing, and the time required to achieve a maximal oxygen debt may be somewhat shorter.)

Oxygen intake rate also limits athletic achievement.

1. Oxygen intake during an activity is the oxygen absorbed by the body as a result of breathing.

2. If a man races 50 yards with regular breathing, he'll be able to take in at least some of the oxygen which he needs to swim this distance.

3. The ability to take in oxygen can be increased through proper training.

Considerable differences have been shown to exist in rate of oxygen intake between persons having varying levels of physical conditioning:

Maximum oxygen intakes of average persons during exercise have been found to be in the neighborhood of 2.5 liters per minute.

Some highly trained athletes are capable of developing oxygen intakes as great as 5.5 liters per minute.

The critical factors which determine this rate of oxygen intake are the amount and the quality of the blood passing through the lung capillaries. (Capillaries are the smallest blood vessels or tubes in the body. Oxygen, food, and waste products are transported to and from the blood through the capillary walls.)



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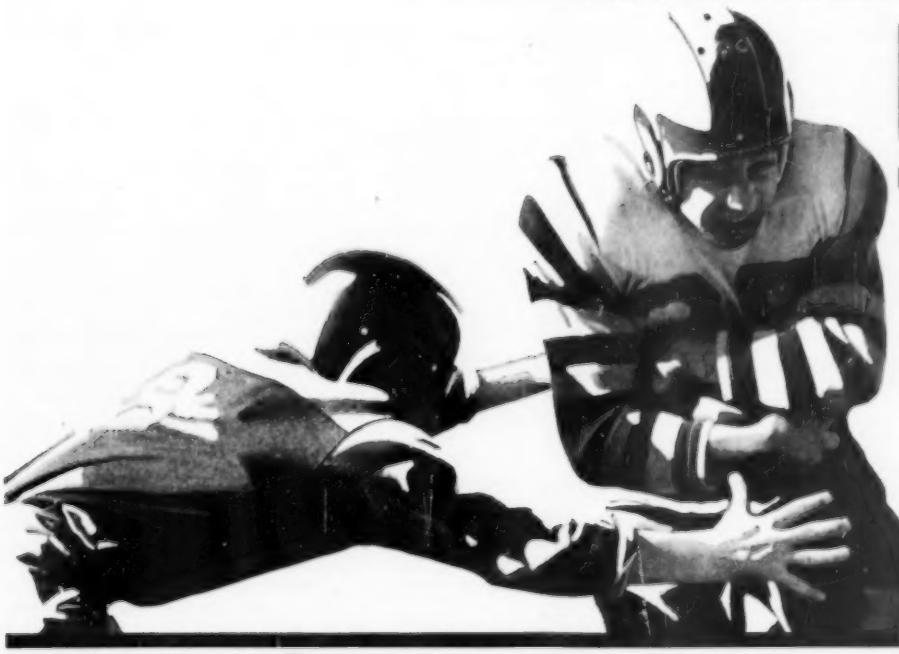
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Under normal atmospheric conditions, all blood leaving the lungs is about 98% oxygen saturated. (The total capillary surface in the lungs is about 100 square meters or approximately the surface area of two 7-foot wide racing lanes in a standard 25-yard pool. Even in severe exercise, only about 1 pint of blood passes through the lungs each second. Obviously, there's ample chance for aeration.) Therefore, there can be little difference between the athlete and the average person in this respect.

However, the athlete is able to pass a greater volume of blood through the lungs per unit of time due to his more efficient circulatory system. A greater quantity of 98% saturated blood will carry a proportionately greater amount of oxygen.

The blood of the highly trained athlete will be richer in hemoglobin (the oxygen carrying compound of the blood) than will the blood of the average person. Therefore, assuming equal saturation levels of 98%, a given quantity of athlete's blood will carry more oxygen than will a similar volume of average blood.

Total oxygen utilization of a subject for a particular activity is the sum of his oxygen intake and his oxygen debt.

1. At any given level of work intensity, the athlete because of his greater efficiency and greater skill utilizes less oxygen than the average person.

2. With intense activity, the average subject won't be able to increase his oxygen utilization above its normal resting level as much as will the trained athlete.

The average person is capable of utilizing 8 to 10 times as much oxygen during severe exercise as he does while at rest.

The athlete may be able to increase his resting oxygen utilization by 15 to 20 times during activity. (Some of the mechanisms of this increase have already been covered. The others will be omitted as they aren't pertinent to the discussion.)

3. Exercise may be classified according to its severity.

Steady-state work is that of a low enough intensity to enable the subject to take in as much oxygen as he needs to perform the exercise:

The individual doesn't build up a significant oxygen debt, so that respiratory distress doesn't limit his performance.

Total oxygen utilization is equal to oxygen intake.

All-out work is that which is of a high enough intensity so that the subject's oxygen utilization exceeds his oxygen intake, and an oxygen debt develops:

The average rate at which the oxygen debt is built up may be very rapid as in a 100-yard sprint, or it can be more gradual as in a 440-yard race. In either case, exhaustion occurs whenever an individual's oxygen debt reaches the limit of his tolerance for oxygen debt.

It has been estimated that a track man would have to generate 15 horsepower if he were to run 100 meters in 10.0 seconds. This would require an oxygen utilization of about 29 liters in the 10 seconds. Oviously, most of this total oxygen would have to be supplied by the debt mechanism since maximum intakes rarely run over 5 liters in an entire minute. The ability to work temporarily without an adequate oxygen supply is the body's chief means of adapting to sudden stress situations such as athletic competition or unexpected submersion in water.

In summary, there are several differences between the exercise metabolism of the athlete and the average person:

1. The athlete has a performance reserve of available oxygen since he requires less oxygen than the average person to perform a given task.

2. The athlete has a performance reserve of available oxygen since he can take in more oxygen per unit of time than the average person.

3. The athlete has a performance reserve since he can tolerate a greater oxygen debt than the average person.

4. The athlete has a performance reserve of available oxygen since he can increase his resting oxygen utilization more than the average person.

Respiratory metabolic principles can be applied to conditioning programs for competitive athletics.

The human body develops functional efficiency only when stimulated to do so. This is a direct application of the fundamental physiological Law of Use and Disuse.

1. Oxygen debt tolerance can be increased only by repeatedly taking an athlete up to his existing limit. The more frequently and the more nearly that limit is reached, the faster will be his build-up of oxygen debt tolerance and the higher will be his eventual limit.

2. Oxygen intake can be increased only by subjecting an individual to situations in which his existing oxygen intake mechanism is taxed to the limit.

That is, he must be exercising beyond the steady-state level and into the range of all-out work so that he's continually taking in as much oxygen as possible.

The more time an athlete spends in this type of work, the greater will be his eventual oxygen intake capacity.

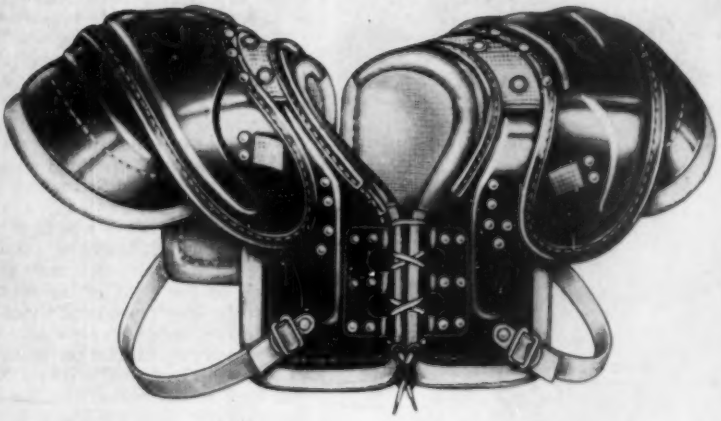
3. Oxygen utilization can be minimized only by the development of skill and efficiency in the particular activity being performed.

Different types of conditioning will develop various desirable metabolic characteristics.

1. Short wind-sprints of 25, 50, 75, or even perhaps 100 yards repeated many times with little rest between and with restricted breathing, are of great benefit.

The primary effect will be a considerable increase in oxygen debt tolerance. This is due to the relatively large number of times the subject reaches his present limit and to the fact that recovery is never complete

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so that he's always working in debt.

There'll be an increase in oxygen intake. However, this will be somewhat limited, since breathing is restricted and the subject doesn't fully "exercise" his intake mechanism during the actual activity.

There'll be only a slight change in oxygen utilization, since the nature of the work isn't designed primarily to promote skill and efficiency of movement.

2. Middle-distance paced work of 100 to 1,000 yards, which is kept constantly above the steady-state level, which employs regular breathing, and which is repeated a few times with relatively long rest periods between, is also of considerable importance.

Oxygen debt tolerance will be increased slightly, since the subject will or at least should reach the limit of his oxygen debt each time he completes a paced swim. However, since the number of repetitions is restricted by the distance of the swims, the value to oxygen debt tolerance is proportionally limited.

The primary effect will be a significant increase in oxygen intake capacity. That is, the swimmer is being pushed to the limit of his intake for relatively long periods of time.

There should be a reasonable lowering of oxygen utilization in that, for at least the first few lengths, the person isn't so exhausted that he cannot concentrate upon efficiency of movement and development of skill.

3. Long distance swimming which is mostly at a steady-state level is useful early in the season for advanced swimmers and throughout the season for beginning swimmers. (Only the rare individual who's very highly trained in pace can work consistently above steady-state and build up a slow but constant oxygen debt when swimming over 500 to 1,000 yards.)

This type of training produces very little change in ogyxen debt tolerance. The subject is pressed to his limit only once in his final sprint.

There will be very little increase in oxygen intake, since at the steady-state level intake capacity isn't taxed to its limit.

There should be a considerable reduction in oxygen utilization since skill and efficiency of movement are prime objectives of this type of training.

The relative importance of oxygen debt and oxygen intake in swimming cannot be answered simply. In general, the shorter the race, the greater the value of having a high oxygen debt tolerance. The longer the race, the greater the value of having a high oxygen intake capacity.

1. In research, the greatest oxygen debts have been found in 100- to 220-yard swimmers, 440- to 880-yard runners, and other highly conditioned athletes trained for events in which the duration of activity varies between 40 seconds and 2½ minutes.

2. The greatest oxygen intakes have been recorded in 440-yard to 1,500-meter swimmers, 1-mile to 4-mile runners, and other athletes specializ-

ing in events in which the duration of activity ranges between 2 and 20 minutes.

3. Assume, for example, a boy who can tolerate an oxygen debt of 16 liters has a maximal oxygen intake of 4 liters per minute:

If he competes in a 100-meter sprint and finishes exhausted after 1:00.0 minutes, he'll have utilized 20 liters of oxygen.

Oxygen debt will have provided 16 liters or 80% of the total requirement at a rate of 16 liters per minute.

Oxygen intake will have provided 4 liters or only 20% of the total requirement.

If he competes in an 800-meter race and finishes exhausted after 12:00.0 minutes, he'll have utilized 64 liters of oxygen.

Oxygen debt will have provided his limit of 16 liters or only 25% of the total requirement at a rate of 1¼ liters per minute.

Oxygen intake will have provided 48 liters or 75% of the total requirement.

4. The point at which the oxygen debt and the oxygen intake would have equal value in swimming would depend upon the individual and his particular state of training and skill.

This has been determined only in a few case studies, since it's a matter of limited general application.

For most good swimmers, it would occur somewhere between 200 and 440 yards.

Recommendations for training programs can be based upon respiratory metabolic principles.

1. The most valuable single respiratory metabolic conditioning exercise for swimmers who compete at 220 yards and below is a large number of 25- to 100-yard repeated sprints with little rest between and with breathing restricted as possible.

This technique covers only one aspect of the conditioning of these men and doesn't imply that short sprints are the only type of valuable workout. Obviously, in addition to oxygen debt changes, modifications in oxygen intake and oxygen utilization are to be desired greatly. Furthermore, the coach who makes use of physiology must consider aspects other than respiratory metabolism.

Generally, 50-yard swimmers should have greater rest time for recovery between these short sprints than 220-yard swimmers. This follows from the fact that oxygen debt probably isn't complete in only 22 to 25 seconds and thus plays less of a role in the 50-yard race than in any other event. Factors of skill and power appear to play the dominant role in 50-yard performances.

2. The most valuable single respiratory metabolic conditioning exercise for swimmers who compete at 220 yards and over is a relatively large number of 100- to 1,000-yard repeated hard swims with moderate rest between and with maximal breathing. Again, this is only one aspect of a good training program for these swimmers.





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The physiology of breath-holding plays an important role in competitive swimming.

Experiments show that duration of breath-holding can be modified.

1. Fresh air contains 20.95% oxygen, .04% carbon dioxide, and 79.01% nitrogen and other inactive gases.

2. At rest, the average gas concentrations in the lung cavities (alveoli) will be in the neighborhood of 14.3% oxygen, 5.6% carbon dioxide, and 80.1% nitrogen. (Although the actual volume of nitrogen doesn't change between inspiration and expiration, its percentage of the total air in the lungs does vary as oxygen is removed and carbon dioxide is added. The volume of oxygen used will not necessarily be equal to the volume of carbon dioxide produced.)

3. Ordinarily, a person can hold his breath after normal breathing until the gas concentrations in his lungs are about 10% oxygen, 7% carbon dioxide, and 83% nitrogen. From this information alone, one can see that either the increase of carbon dioxide or the decrease of oxygen may force the subject to stop holding his breath.

4. Hyperventilation or forced breathing washes out carbon dioxide normally present in the lungs and blood, but has practically no effect on oxygen storage since blood is regularly 98% saturated. After hyperventilation, breath-holding can be prolonged until lung gas concentrations approach 8% oxygen, 5 to 6% carbon dioxide, and 86 to 87% nitrogen.

Consequently, it's evident that normal breath-holding must be limited by carbon dioxide accumulation rather than by lack of oxygen.

After hyperventilation which blows off carbon dioxide, breath-holding is prolonged and may be terminated finally by an oxygen deficiency rather than a build up of carbon dioxide.

In several ways, exercise is partially dependent upon or at least related to the mechanisms involved in breath-holding.

1. Assuming that in swimming a slight loss of mechanical efficiency accompanies the breathing movement, some hyperventilation immediately before the short sprint events would be beneficial as it would prolong the period before the first breath need be taken. The advantage of hyperventilation would be relatively meaningless in the longer races.

2. Although it has been stated that moderate hyperventilation before exercise can be used to advantage, it should be noted that excessive forced breathing reduces blood flow to the brain, causing dizziness and a false sense of well-being. Even a momentary loss of clear thinking and competitive desire could be a serious handicap in a close race.

3. In exercise, just as in normal breath-holding, the accumulation of carbon dioxide may be more of an immediate limiting factor than lack of oxygen. (Of course, the two are so closely interrelated that they can be separated only for convenience of discussion.) The point of application is

that continual, deep hyperventilation throughout the exercise will help combat the build up of carbon dioxide. Shallow breathing and failure to exhale completely are two of the most serious respiratory faults commonly found in swimmers.

The mechanics of breathing movements can affect competitive performances.

The chief function of respiratory movements (inspiration and expiration) is to transport air between the exterior atmosphere and the lungs.

1. Although the nose, mouth, trachea, and other air passages are used in breathing, gaseous exchanges can occur only in the alveoli of the lungs. The upper passages therefore are referred to as the "dead air space" and are physiologically inactive.

2. Excessively rapid breathing is inefficient since it will fatigue the respiratory muscles and reduce the depth of respiration.

With shallow breathing, much of the air being moved will be trapped in the dead air space and thus be unavailable for gaseous exchange with the blood.

A "tax" of about 2.5% of the available oxygen in each normal breath taken on land is used in performing the respiratory movements themselves. Without doubt, this tax is considerably higher for the competitive swimmer who has to inhale against the water pressure on his chest and who also has to exhale against the resistance of the water. Obviously, an excessive number of shallow breaths will be unnecessarily fatiguing even though the endurance of the respiratory muscles may be quite high as a result of training.

3. Generally, exercise increases respiration rate. This is particularly true in swimming.

The need for regulating the breathing cadence with rapid stroke movements may increase the respiration rate and decrease the respiration depth beyond the level of efficiency.

The relatively dense medium of water pressing in on the chest also tends to decrease the depth of respiration.

Diaphragmatic (abdominal) breathing is preferable to thoracic (chest) breathing in swimming.

1. The center of gravity of the body may be defined as the point about which the weight is evenly distributed or balanced in every direction.

It's really the center of mass of the body; and one can consider, for purposes of computation, that the entire body weight is located at this point.

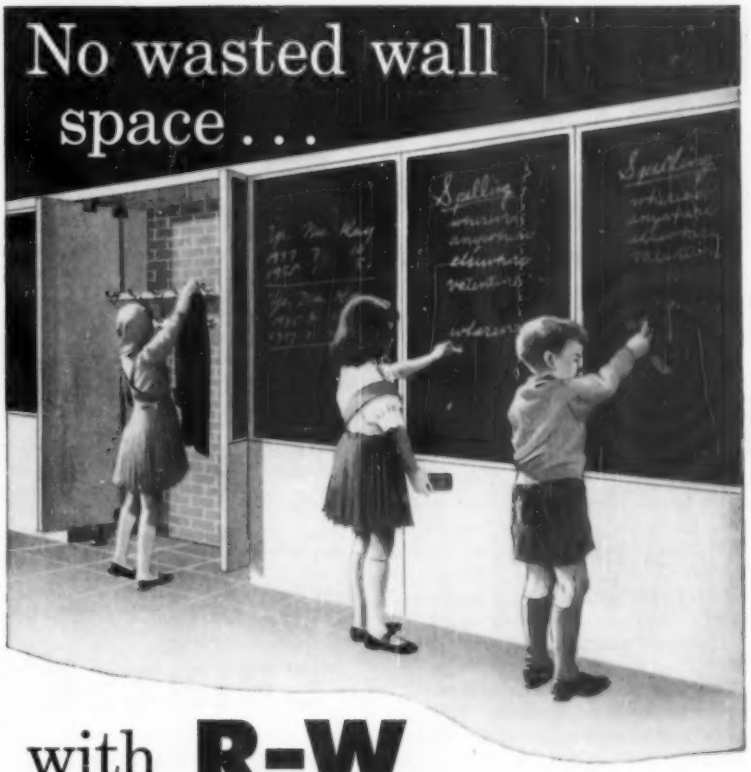
In the swimmer, the center of gravity is located near the navel.

2. The center of buoyancy in water may be defined as the point about which the lifting or buoyant forces of the water are evenly distributed or balanced in every direction.

For purposes of computation, one can consider that the entire buoyancy of the body is located at this point.

In the typical person, the legs are relatively dense whereas the chest

(Continued on page 85)



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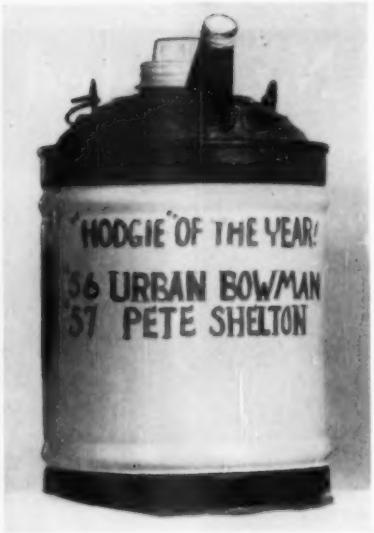
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CHINESE BANDITS and the RED RAIDERS

By **ROCCO J. CARZO**
Asst. Coach, University of Delaware

UNDOUBTEDLY most of you are familiar with the celebrated Louisiana State "Chinese Bandits." At Delaware we're not as fortunate to have three equal units to justify a "white" team, a "go" team, and a "Bandit" team. We do, however, have about 22 regulars and a balance of approximately the same number working to become members of our third team.

This third team is more commonly known as the "Red Raiders." They're not defensive specialists as the "Bandits," but rather boys who lack the experience to play regularly, either offensively or defensively. Although the "Raiders" aren't as renowned as the "Bandits," their enthusiasm is just as intense.

Besides providing the experience needed to become varsity athletes, the "Raiders" perform other duties that are just as important in the development of our total football program. The duplication of our opponents' offensive and defensive patterns is one of these vital tasks.

During pre-season workouts, the "Raiders" participate in all group and team drills, are taught the fundamentals of blocking and tackling, and the rudiments of our offensive and defensive systems.

The nucleus of the team begins to form about 10 practice sessions prior to the first game. When the 11 best boys have been selected, they're oriented for their first assignment—to reproduce our first opponents' basic offense and defense.

The information compiled from previous years' scouting reports and game movies is passed on to the team, and they usually begin by learning the opponents' stance, cadence, and basic formations. The backfield patterns and line-blocking assignments are walked through against a dummy team standing in our defensive formation. This initial orientation usually takes about 25 minutes lecturing and approximately 15 minutes practical work.

The use of visual aids has played an integral part in expediting this process. Our opponents' plays are diagrammed against our defenses on 18" x 24" cards and carried on the field to flash during the scrimmage.

A color system is used in these diagrams, which allows for immediate identification of each position and the corresponding assignment. All primary blocks by the lineman and initial paths of the backs are diagrammed in blue. The quarterback and the path of the ball are diagrammed in red, and blocks at the cut-off or downfield blocks are drawn in green.

This eliminates a great deal of confusion and makes use of valuable practice time which would normally be wasted explaining assignments in the huddle.

About halfway through the season we begin to get enough boys to scrimmage two "Raider" groups offensively against our varsity defense. During this scrimmage, one "Raider" group is checking their assignment while the other is running a play against the defensive team.

Once the season has begun, this briefing takes place on Monday afternoons after the "Raiders" finish their game with the freshmen and while the varsity is viewing the movies of Saturday's ball game.

When the varsity arrives on the field, the "Raiders" will demonstrate all formations and walk through the next opponents' plays and defenses following our verbal scouting reports.

This is an example of a Monday and Tuesday practice schedule.

Monday, September 29, 1958—(Pre-Lafayette):

4:30-5:45: Varsity view Saturday game films.

4:30-5:30: "Raiders" scrimmage frosh.

5:30-5:45: "Raiders" review opponents' attack.

5:45-6:15: Oral scouting report—"Raiders" demonstrate formations, plays, etc.

6:15-6:30: Run on dummies—offensively (3 teams).

Tuesday, September 30, 1958—(Pre-Lafayette):

4:30-4:40: Finish Lafayette scouting report.

4:40-5:15: Group work (work on individual technique).

5:15-5:30: Kicking game ("Raiders" receiving).

5:30-5:45: 4th group scrimmage frosh.

5:30-5:45: Defensive review 1 & 2 ("Raiders" run attack).

5:45-6:05: Passing game vs "live" secondary (use frosh secondary).

6:05-6:25: Run on dummies—"live" ends and secondary ("Raiders" ends, frosh secondary).

6:25-6:30; 5 minutes drive to T.D. (1 and 2 groups on 10-yd. line going for T.D. "Raiders" use goal-line defense).

Another function of the "Raiders"

TWIST LOCK

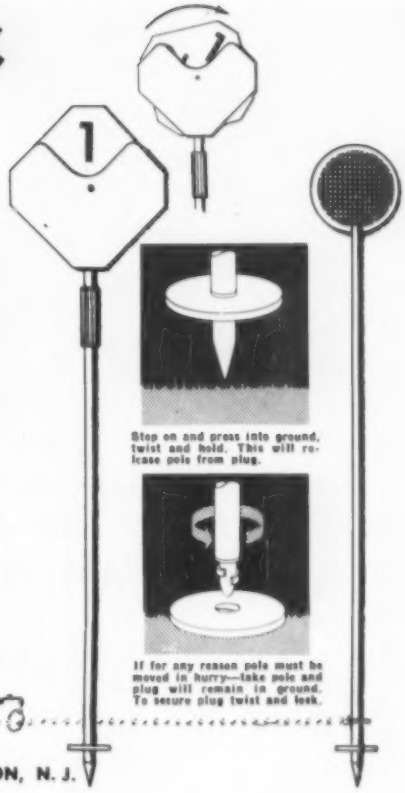
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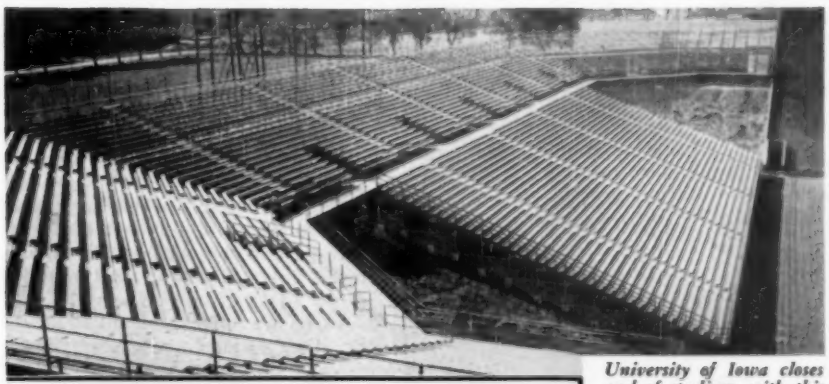


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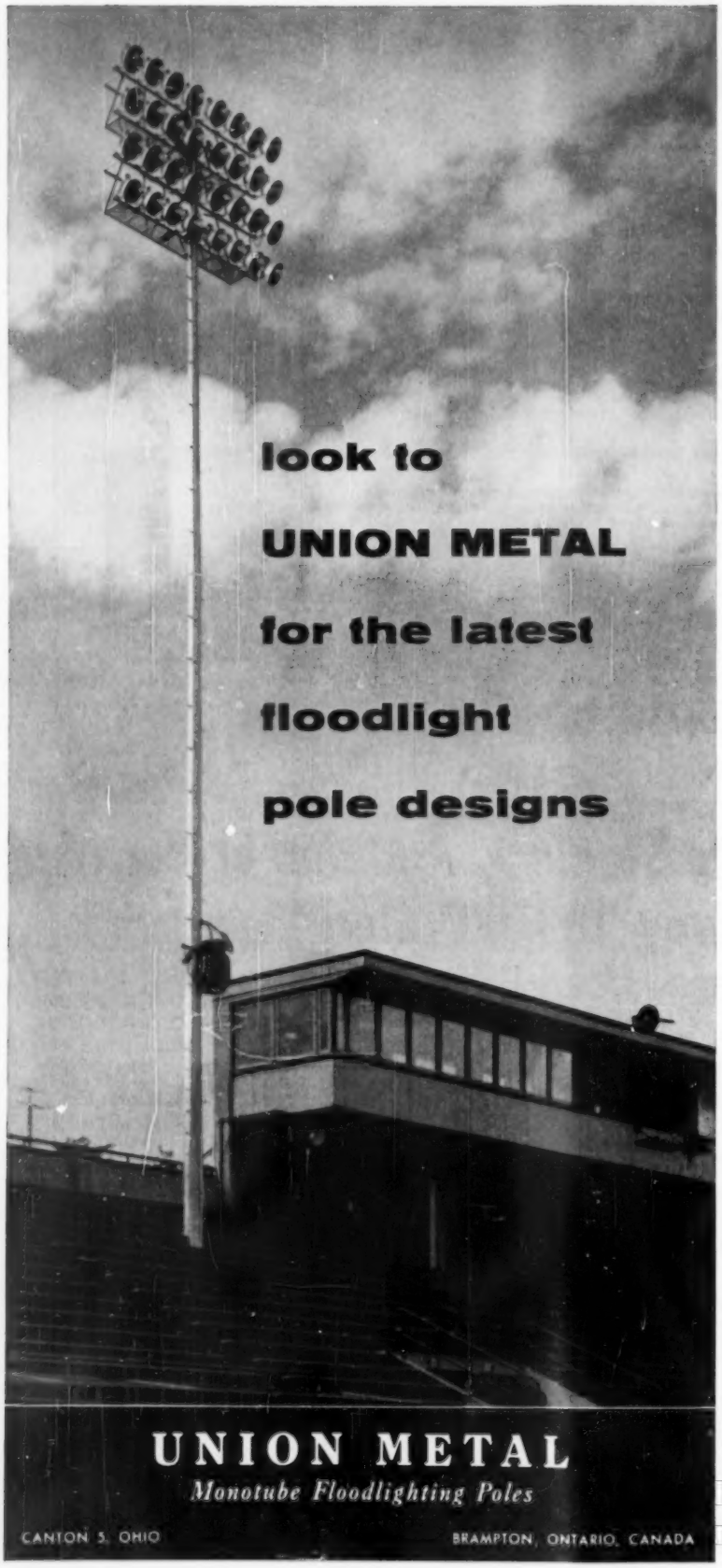
This equipment is practical for complete stadia seating many thousands, or for additions to existing facilities (*see photo*). Made in easily demountable standard parts, it can also be re-used for temporary set-ups of any size and form—outdoors or inside.

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Write for Bulletin 39

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is to experiment with any new offensive or defensive wrinkles that the coaching staff is trying to perfect. This has served significantly in the development of our Winged-T offense as well as our defensive system.

Normally, when the coaching staff has decided to install a new offensive series, the "Raiders" are the first to be exposed to the new material. The techniques and coaching points of the particular series are ironed out. Then the team begins polishing it up for the scrimmage. The following day the films of the previous day's scrimmage are viewed and the particular series is evaluated in terms of its objectives.

PURPOSE OF PLAYS

Most plays are designed for one of three reasons: (1) to eliminate the tendency of our offensive system to fall into a pattern that can easily be discerned by the defense, i.e., to prevent keying; (2) to round out or add a counter play to a particular series that has been a consistent ground gainer, i.e., to keep the defense honest; and (3) to gain a pre-determined or more specific objective, which would be, let's say, 3.5 yards per try or less.

Competition between the freshman and our "Raider" squad has been the best testing ground for the development of our offensive series in the weekly "Monday Night League."

The preparation of this team to perform these duties has been one of my responsibilities in the football program. I'd like to outline some of the methods used to ready the "Red Raiders" to carry out the many tasks they're asked to fulfill.

Being a "Red Raider" isn't a glorious role. If anything, it's sometimes fruitless. What then do we do to motivate these boys who are doing a man's sized job?

It's axiomatic to the boys that they're preparing themselves for future varsity competition. To supplement this stimulation, we've added a few ideas of our own.

First, we have an annual award to the "Raider" who contributes most to our team as determined by his teammates. This award is nothing more than a one gallon oil can painted blue and gold and with the "Raiders" coat of arms—a picture of a red scrimmage vest. The boy's name is painted on the can and the trophy is permanently displayed in our training for all to view.

The award is known as the "Hodgie of the Year!" The term, "Hodgie," is nothing more than a

battle cry that emerged on the field. It started out by the boys yelling "Hodgie Baby" to signify an emotional uplift whenever the "Raiders" needed a little of what we call "juice" or enthusiasm. It eventually was shortened to one word.

I think the original words were picked up from Nat "King" Cole's record, *Hajji Baba*, which was a hit at the time, and instilled into the "Raiders" by our first award winner, Urban Bowman.

The "Raiders" also have their own bulletin board—red, of course—in the varsity locker room for posting any notices pertaining to their team, such as the starting lineup for the "Monday Night League", anything outstanding from the previous day's practice, etc.

During our scrimmage sessions, pieces of chewing gum are awarded to anyone making an excellent tackle, block, or run. This, perhaps, does more immediately to stimulate our boys during the actual practices than any other form of motivation. The competition between our freshman team and "Raiders" has precipitated a bowl game held each year during the last week of practice.

I'd like to mention that the coaching staff at Delaware believes that one of the most important facets of their job is the selection and placement of personnel. We're constantly working and planning to play the 11 best ball players.

Because of the time limitation on our practice sessions, there are occasions when some boys are overlooked. However, these boys cannot remain unnoticed very long because of the ample opportunities provided for them by the "Red Raiders." During the past season, there were three boys who became letter winners because of the improvement shown in their daily performances with the "Raiders."

In future years we expect more boys to come forward and contribute to our varsity because they were willing to pay the price of beginning at the "Red Raider" level.

•

FOOTBALL FATALITY REPORT

NOW available for free distribution to administrators and coaches is the 27th Annual Survey of Football Fatalities (1931-1958) prepared for the American Football Coaches Assn. and the NCAA Football Rules Committee by the Committee on Injuries and Fatalities, Dr. Floyd R. Eastwood, chairman.

The report may be obtained by writing to Mr. D. O. McLaughry, Secretary-Treasurer, The American Football Coaches Assn., Box 1083, Hanover, N.H.

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For the player, the game-minded coach knows that King-O'Shea patterns complement the fluid grace of the player; moves with his every move. These are uniforms cut for unrestricted action.

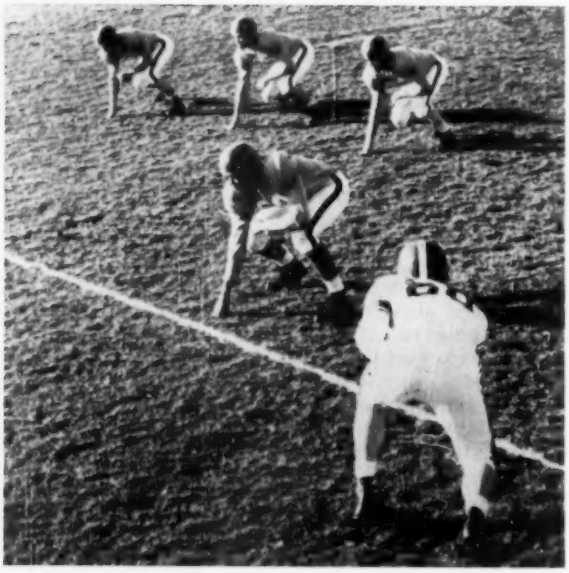
For the crowd, this discriminating coach knows his team will look their "action-fit" best because of King-O'Shea styling and superb tailoring. Color-balanced trims and inserts, basketball's finest fabrics, and that special "needle-knowledge" are all blended into the finest and most distinctive of basketball uniforms... King-O'Shea.

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"Hanging" Defensive End Play



LECTURING on defensive end play at a clinic prior to the 1958 football season, Coach Tonto Coleman of Georgia Tech pointed out the generally recognized fact that "great teams usually have great ends." They're the "cornerstones" of the line. Coach Coleman then noted, "It seems to me that practically everything 'new' of late on the T formation includes something on 'whipping' the 5-4-2 end."

At the 1959 Coach of the Year Clinic in New York City, one topic which Oklahoma coaches Bud Wilkinson and Gomer Jones discussed and demonstrated was defensive end play techniques. Following them on the program was Eddie Erdelatz, then Navy's coach, who also discussed and demonstrated defensive end play techniques. While their techniques were different, both types of defensive play were designed to keep the ends from getting "whipped."

A type referred to as "hanging" defensive end play, and used by such teams as Rice, Georgia Tech, Michigan State, Miami, Texas, et al., is also designed to keep the 5-4-2 end from getting "whipped," and will be discussed in detail in this article. This type of end play has been most successful for us.

The article will be limited in scope to the *normal* (*tight*) end play from a 5-4-2 (or 6-3-2) defensive alignment versus the T formation, as compared to the techniques, duties and responsibilities of a *wide* end, which won't be discussed. Nor will coordinated defensive stunts between the end and cornerman, linebacker and/or tackle be presented in detail.

The type of defensive end play a coach employs depends on his overall defensive philosophy and strategy. The "hanging" end's stance and his duties and responsibilities are predicated on a *pursuit* type of defense, as compared to a *penetrating* type of play. The objective in the former is to hold the offense to a *minimum* gain, as compared to stopping the play in the offensive backfield for no gain.

In the former, the end usually gets little or no penetration, whereas in the latter he must get much penetration as he plays a converging type of game. Nor is the "hanging" end attempting to drive the offensive end into his own backfield. If he does this, he'll expose himself to getting hooked in by the near halfback.

While strategy sometimes dictates a converging, penetrating type of end play, the pursuit, "hanging" type is designed to stop the long pass or the long run for the "*easy*" touchdown, as compared to stopping every play for no gain. The end's stance doesn't exclude the possibility of his playing a penetrating type of game. Nor does it exclude him from assuming wide responsibility, although he lines up tight initially.

When the tactical situation requires the "hanging" end to "fire" or stunt, then his normal responsibilities are generally assumed by a teammate. In fact today's end must learn to play several positions, as he may move into the defensive tackle position, or to the corner or defensive halfback position, depending on personnel and the defensive strategy employed versus the various flanker sets.

Starting with the 5-4 normal defense versus a straight T backfield, the defensive (left) end (for illustrative purposes throughout the article) lines up in a two-point semi-upright stance with the inside (right) knee in the face of the offensive (right) end. The feet are approximately shoulder width, staggered, with the inside (right) foot forward, and the toes of the outside (left) foot in line with the heel of the forward foot. The feet are perpendicular to the line of scrimmage and the shoulders are parallel to it.

Some coaches have the defensive end head-up on the offensive end, nose on nose. We favor the outside slightly, telling the defensive end to place his inside (forward) foot slightly to the outside of the offensive end's crotch. This places his forward knee slightly to the outside of the offensive end's nose. Both knees are bent slightly, as is the trunk, with the arms and hands hanging free.

The defensive end's *line of sight* is the offensive end's *down* hand, as a blocker must move this first in order to charge. As a result, the defensive end's neck will be bent forward slightly as he focuses his eyes on the end's down hand.

With a little practice, the defensive end will find this stance comfortable and he'll be in a good balanced controlled position. If the defensive end assumes the proper stance and reacts as instructed, he should be able to keep the blockers away from his vulnerable area and legs, and carry out his duties and responsibilities.

By DON FUOSS

Coach, South Orange (N. J.) H. S.

DUTIES AND RESPONSIBILITIES

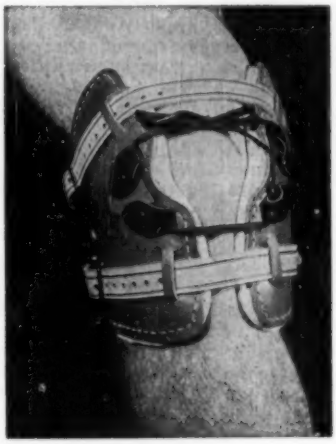
Whereas the *wide* end's primary responsibility is *outside*, the *tight* end's first responsibility is *inside*. The "hanging" end's duties and responsibilities in the 5-4 (and 6-3) are as follows:

1. Keep the off-tackle hole small by playing the offensive end, the cross-blocking tackle or the pulling guard's block.

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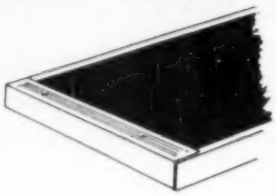
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2. Play the near halfback and/or the fullback's block(s), not getting driven out or pinched in.
3. Play the quarterback on the option, Split-T and Belly.
4. Play the quick flip to the near flaring halfback.
5. Play the power end sweep.
6. Rush the passer or drop off and play pass defense.
7. Play the reverse, "bootleg" or solo.
8. Play the split end, the slot back, and the various flankers.
9. Pursue properly on all plays.

These are the "hanging" end's *normal* duties and responsibilities. Depending on strategical planning and the tactical situation, at times he'll "fire" and/or coordinate his defensive tactics with his teammates instead of "hanging" from a tight end's position in the 5-4-2 defense.

PLAYING THE OFFENSIVE END

Normally the *offensive* end's assignment is (1) to block out, opening up the off-tackle hole; (2) to hook the defender, pinching him in; (3) to block in on the defensive tackle on a double-team or an angle block; (4) to release downfield on a pass pattern; (5) to release downfield as the offside end on a running play; or (6) to pass block. The offensive end also may be used as a trapper, on the end around, to catch the screen pass, etc.

The "hanging" end's primary responsibility is to keep the off-tackle hole small by playing the offensive end first. He should key on the offensive end's first movement, taking a short shuffle (jab) step with the inside foot as soon as the end raises his down hand from the ground. The "hanging" end should stay low, dip his tail, protect his blocking surface and vulnerable area, and use a forearm block or shiver, in order to hold off the offensive end and keep the off-tackle hole small.

We prefer the forearm block, putting the bent elbow in against the neck and the outside shoulder of the blocker, as compared to the shiver. As a target, we instruct our ends to give the blocker nothing except bone on bone—the inside knee and elbow in the blocker's face.

When we attempt to employ a hand shiver, we find our ends get hooked by a back from the outside. The same applies if the defender takes a long step initially with the forward foot. Many teams employ the shiver successfully, however, with the defender keeping his arms stiff and the palms of his hands against the shoulders of the blocker.

Regardless of the technique employed, the defensive end must be careful he dosn't angle inward, turning the shoulders from parallel to almost perpendicular with the line of scrimmage, or he'll be vulnerable to getting blocked in. This is especially true if the offensive end either releases to the inside or blocks in on the defensive tackle, and the "hanging" end leaves his "anchor" to play the end.

ALL-North State Conference center in 1946, Don Fuoss went on to coach at Spencer High School (North Carolina), Bethany College, and Shepherd College. While at Shepherd, he was named West Virginia Coach of the Year (1945) when his undefeated, untied team led the nation in scoring while holding opponents to a total of 31 points. Upon his arrival at East Orange (N. J.) High, he lost no time piloting his team to state honors. His 1958 club compiled a 9-0-0 record, limiting the opposition to a total of 27 points—with his defensive unit yielding just one touchdown! That speaks volumes for the caliber of the defensive techniques presented in this article. Coach Fuoss has also authored a superb book, "Quarterback Generalship and Strategy," and is currently sporting authorship to a brand new book on the kicking game (see page 76).

Assuming the offensive end is attempting to block out on the defensive end, he merely maintains his position as described and fights pressure, keeping the off-tackle hole small. If the offensive end is superior physically and moves the defender, he should retreat straight back, rather than permit himself to be driven in or out, as he can still assist with the tackle from the former position.

Assuming the end attempts to hook the defender, if the end will step into his man in the prescribed manner, then step (slide) *laterally* with his back foot, the blocker won't be able to get an outside position on him. It's a common mistake for the "hanging" end to cross-step with the *front* foot instead of sliding the *back* foot laterally as the blocker steps laterally to hook him from the outside. As the defensive end steps laterally, he should shove the blocker hard keeping him away from his blocking area.

If the offensive end either blocks in on the tackle or releases downfield, depending on whether the play is toward or away from him, the defensive end has other responsibilities. He should never permit the offensive end to come off the line of scrimmage "clean"; he should endeavor to take a "piece" of him every time. It's for this reason he must station himself close enough to the potential blocker.

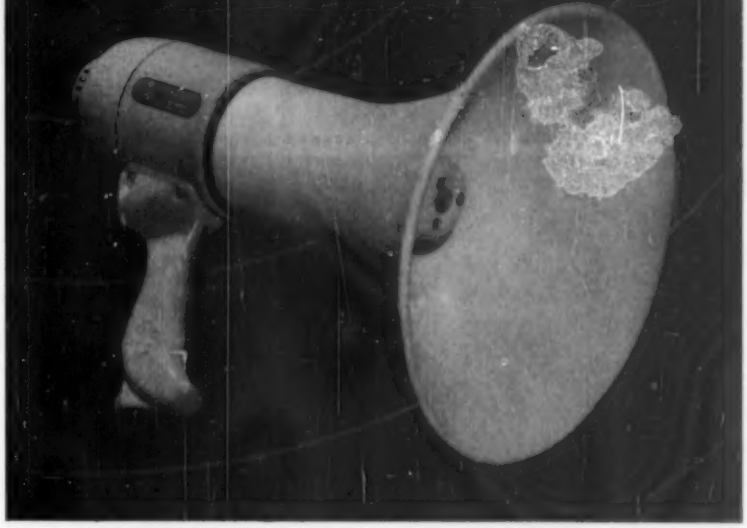
If the offensive end attempts to block in on the tackle, the defensive end is in a position to make it difficult for him to execute a double-team or angle block. If the offensive end is releasing for a pass, the defender is in a position to throw off the timing of the pass by stepping into the end as he attempts to release from the line of scrimmage. His second reaction will now be discussed.

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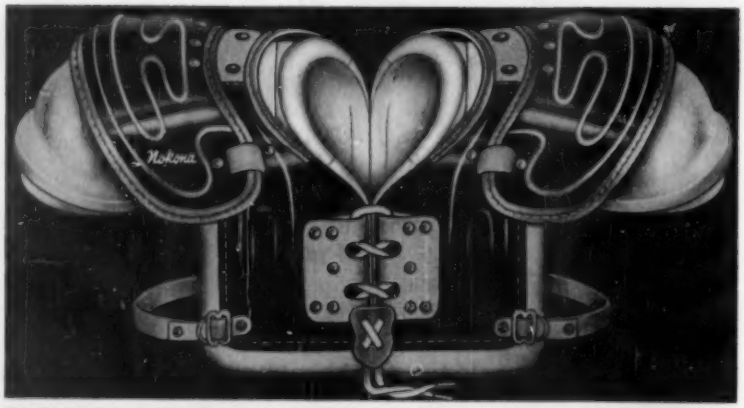
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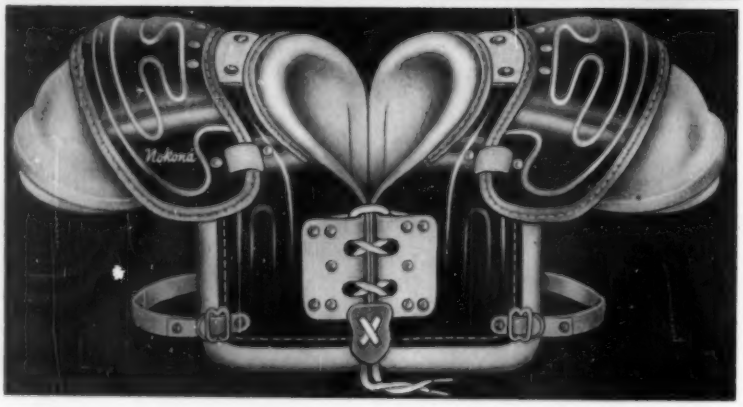
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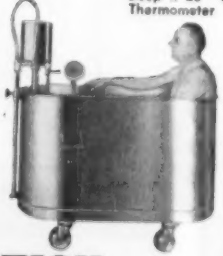
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PLAYING CROSS-BLOCKING TACKLE OR PULLING GUARD'S BLOCK

After stepping into the end, the defender must maintain his balance and be ready to meet the blocker coming from the inside. While we want the "hanging" end to play the end, he shouldn't do so if he must leave his defensive position in order to accomplish this objective.

The defender must shift his eyes immediately from the releasing end to any offensive lineman coming from the inside. Although he's playing the end by "feel" *after* his initial movement, the "hanging" end must look quickly for the next potential blocker. He should retain his hitting position quickly.

The cross-blocking tackle and the pulling on-side guard, respectively, are the next nearest blockers who can "hurt" the end, as they're likely to drive him out, permitting the ball-carrier to run off-tackle. It's also possible for the off-side guard to block out on the defensive end, although the offensive backfield men are in a nearer position to block the defender quicker.

The "hanging" end should keep his feet in the same relative position as in his initial stance and movement, attempting to stay low, knee and forearm in the face of the blocker, forcing the man to come to him from an inside-out position. He should remain on the line of scrimmage and attempt to "stack" the blocker, keeping the off-tackle hole small. Should the end penetrate beyond the line of scrimmage, the trapper can drive him out, opening up the off-tackle hole for the ball-carrier.

Should any of these blockers attempt to hook the end from the outside by driving their head and shoulders beyond the defender, he should slide his back foot laterally, pushing the man away from his blocking area, as he did with the hooking end. While this type of play is difficult to defend against, it takes a good inside fake off-tackle to set-up the interior lineman's outside (hook) block.

If the fake isn't evident or it's a power sweep, which will be discussed shortly, the defensive end is able to observe both the blocker and the ball-carrier attempting to get outside, and can react accordingly. Should the end be hooked successfully, he should spin out and pursue the ball-carrier.

PLAYING NEAR HALF-BACK AND/OR FULLBACK'S BLOCK(S)

The man blocking the end out or in may be the halfback and/or the fullback, instead of a lineman. Many teams now seem to favor the off-tackle play with the halfback blocking out on the defensive end.

The inside-out block, which is somewhat difficult to execute properly, is likely to be more effective if the halfback simulates a dive play and then turns out on the defensive end, instead of going directly toward the

end. Ohio State has been particularly effective with this technique in "whipping" the 5-4 defensive end.

In playing either the halfback's or the fullback's block, the end should step the same as was indicated previously with the inside foot, and meet the blocker's *outside* shoulder with the defender's *inside* foot forward, his outside foot back, getting his *inside shoulder* under the blocker's, using the latter's body to keep the off-tackle hole small.

Some ends try to hold off the halfback or fullback with a forearm shiver or forearm block. While we prefer the latter, in this instance we feel the blocker has a run at the defender and we instruct him to dip his shoulder under the blocker's and attempt to "stack" him. He shouldn't permit himself to get knocked down.

While the end must not be driven out, he can't play the inside too tightly or get hooked in by the back or the ball-carrier can merely veer to the outside—generally for a sizeable gain.

Should the end be blocked successfully, as is likely to be the case at times, especially versus the power off-tackle play, he should retreat straight backward, not to the inside or outside. Although driven back, your end eventually will be in a position to assist with the tackle, provided he isn't knocked off his feet.

PLAYING THE QB OPTION

If the quarterback comes down the line of scrimmage by himself, as on the Split T option, the end's first responsibility is still inside—keeping the off-tackle hole small. After playing the end first, the "hanging" end then devotes his attention to the quarterback, playing him from an inside-out position.

The end isn't responsible for the pitch-out to the off-halfback, as the fullback may cut back off-tackle at the last second or the quarterback will keep inside—if the end attempts to asume outside responsibility in order to stop the pitch-out.

If the fullback attempts to block the end, he's played in the manner prescribed previously. If the fullback ignores the end, as generally is the case in the Split T option, going for the cornerman, the "hanging" end must remain on the line of scrimmage, feet perpendicular to it, with the shoulders parallel to the imaginary line.

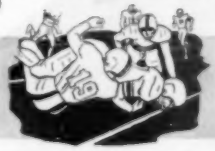
Should he turn in at an angle to play the quarterback, he's likely to get "whipped" as the quarterback will option successfully off of him. The end must "hang" on the line, making the quarterback come to him, rather than going after the quarterback.

Since the end forces the quarterback to retain possession, unless he pitches out prematurely the quarterback cannot cut back inside. *The end attempts to string out the quarterback to the sideline.* As he's slightly be-

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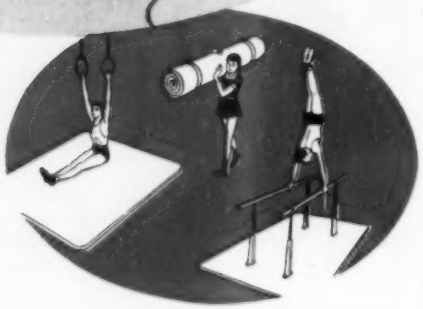
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hind the quarterback, should he attempt to tackle him from an inside-out position it should be in a high sweeping motion, attempting to knock the ball loose on a fumble if the quarterback laterals.

As the ball is released, the end must push off of the quarterback, not permitting himself to be eliminated from the play by the blocker. If the ball is pitched out, the end must sprint to a cut-off point, and with the assistance of the cornerman and linebacker gang-tackle the off-halfback as he attempts to turn upfield with the ball.

Versus the belly or fullback ride off-tackle, the "hanging" end must play the outside shoulder of the fullback, as was described previously, making certain not to fall off to the inside. He must keep the off-tackle hole small, but still be able to step around the fullback to play the quarterback should the latter pull out the ball on the keep play.

If it's the fullback off-tackle pass, most coaches have the defensive end rush the passer after playing the fullback ride. The end must be careful the off-side halfback doesn't hook him, permitting the quarterback either to drop straight back on the play number pass, with no one rushing him, or roll around his off-halfback's block and option run-pass the cornerman.

Any time the end is hooked, he's permitted to spin out, although he should do this only as the last resort. If he plays his position properly he should never be hooked, although he might be defeated physically at times. While it's a cardinal mistake to be knocked down, the end, if "whipped" in this manner, should roll over as quickly as possible, regain his feet and take the proper pursuit on the ball carrier.

PLAYING THE QUICK FLIP TO THE NEAR HALFBACK

On the quick flip to the near halfback, the defensive end still plays the end first. As the end attempts to get outside to screen block for the halfback, the defender should step laterally to the line of scrimmage, as was discussed previously. The end should sprint to the cut-off point to tackle the ball-carrier as he approaches the line of scrimmage.

The end shouldn't be suckered by the halfback "cheating" to the outside, perhaps as an intentional tip-off, or by a big fake pitch of the quarterback, attempting to get the end to cover outside quickly, instead of playing the end first and protecting the off-tackle hole.

Should the defensive end attempt to play the halfback first, covering outside, he'll open up the off-tackle hole for a delayed play coming back inside. Nor should the end be fooled by the fake trap over center and pitch-out to the fullback, or the double fake—fake pitch to the fullback (or halfback), fake trap to off-halfback, pitch-out to the fullback going wide.

The former, the fake trap and pitch-out to the fullback, is the one on which Oklahoma scored within two plays against Syracuse in the 1959 Orange Bowl game. If the "hanging" end will merely play his blockers and react to pressure, instead of chasing the quarterback's fake, he won't be suckered out of position, permitting the ball-carrier to come through his unprotected territory.

The defensive end in the 5-4 can play the power end sweep in one of two ways. Generally the quarterback will reverse-pivot and hand off or pitch back to the off-side halfback, with the near halfback and the fullback leading the play. There's no inside fake first on the power sweep, although the quarterback may bootleg the ball, which will be discussed shortly.

Of course the quarterback could fake the fullback up the middle and hand off to the off-halfback coming outside with the guard(s) leading the sweep. The end plays the blockers, as was described previously.

In the power off-tackle play, generally the offensive end will block in on the defensive tackle, and the backs will attempt to kick out the defensive end. The power end sweep may be run the same way with the near back attempting to hook the defensive end, and the fullback turning in on him if the near back cannot contain him.

In playing the power end sweep, the defender may "fire," instead of hanging, attempting to "stack" the blockers before they get out of their backfield. He should attempt to meet the *near* halfback on his second step, *inside* leg forward, under the near halfback's *outside* shoulder, fighting to the outside.

If he's successful in stripping the interference and forces the ball-carrier to run a deeper arc, the end has done a fine job. Since this is a change-up tactic from his "waiting" game, it's likely to be successful. The end shouldn't "fire" too wide to the outside, as he still has inside responsibility. In the former case, the play could break back inside of him.

Should the end "fire" into blocker and get knocked down, he should spin out and pursue, taking the proper pursuit on the ball-carrier and not running an arc himself.

The second method of playing the power end sweep is to string out the play from inside-out, hand fighting and pushing, making two men block the end. It's not the end's responsibility to contain the ball-carrier, as he must protect inside in the event the off-halfback turns upfield to the inside instead of swinging wide outside.

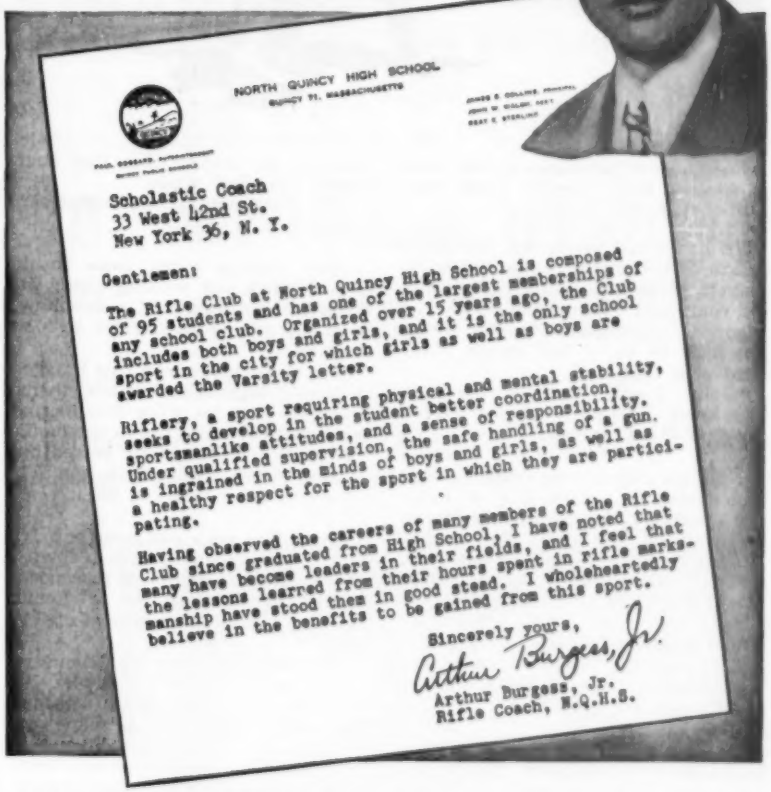
The near halfback (and fullback) will be attempting to get the head and body beyond the end in order to block him in. By stepping laterally and using the hands, the end will make it difficult for the blocker(s) to get at his legs. Should he be hooked, the end is permitted to spin out as a last resort.

(To be concluded next month)

"Riflery promotes coordination, sportsmanship and responsibility"

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Rifle Coach, North Quincy High School





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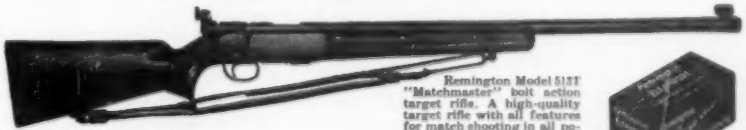
The Rifle Club at North Quincy High School is composed of 95 students and has one of the largest memberships of any school club. Organized over 15 years ago, the Club includes both boys and girls, and it is the only school sport in the city for which girls as well as boys are awarded the Varsity letter.

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Having observed the careers of many members of the Rifle Club since graduated from High School, I have noted that many have become leaders in their fields, and I feel that the lessons learned from their hours spent in rifle marksmanship have stood them in good stead. I wholeheartedly believe in the benefits to be gained from this sport.

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COACHES' CORNER



Please send all contributions to this column to Scholastic Coach, Coaches' Corner Dept., 33 West 42 St., New York 36, N. Y.

THE basketball coach was exhorting one of his normally fine defensive players to greater effort. "You can't let your man run around loose," he snapped. "Your teammates are working hard to get a few points. They need your support."

"Gosh, Coach," replied the boy, "it's home. I forgot it when I packed my gear this afternoon."

Good umpires always make it clear who's boss. In a close play at home one afternoon, Umpire Charlie Moran hesitated on the call. The catcher barked, "Well, is he safe or out?"

"Son," remarked Charlie softly, "Till I call it, it ain't nuthin'."

In winter when it's cold out,
Appears the baseball holdout.
In spring when it's warm out,
He gets his uniform out.

The veteran coach was counseling his youthful replacement: "You'll discover that in nearly every skull session some youngster will be eager to argue. Your first impulse will be to silence him. I advise you to think carefully before doing so. He'll probably be the only one listening."

"How can we ever show our appreciation?" gushed the superintendent to the coach at the banquet commemorating an all-victorious season.

"Sir," replied the coach drily, "ever since the Phoenicians invented money, there's been only one answer to that question."

One of the greatest diamond raconteurs extant, Tommy Richardson, president of the Eastern League, has been slaying 'em for years with the one about a ball player named Riley, who was drowned when his fishing boat capsized. Everyone was astonished upon learning that he had left $100,000.

"To think he'd leave you that much money," intoned Mrs. Murphy to Mrs. Riley at the wake. "Him that could nather read nor write."

"Nor schwimm, ayther," added Mrs. Riley.

After winning a big game in the Cotton Bowl, the visiting coach was thrown a big dinner at a downtown hotel. He proved insufferable with his boasting.

"I'm a self-made man," he bragged. "I was a high school coach, then a principal. Now I'm a big time football coach and have $100,000 in the bank."

A nearby Texan quietly looked him up and down. "All right, son," he drawled. "I'll match you for it."

Flying East for a ball game one Friday, Terry Brennan turned down a steak dinner. He explained to a sports-writing friend that as a Roman Catholic he couldn't eat meat on Friday.

"I'm eating mine," his friend replied, "and I'm also a Catholic. I've heard there's an automatic dispensation when you're in a plane and they're only serving meat."

"It may be so," answered Terry. "But we're a little too close to headquarters up here."

Clark Griffith was pitching against the Phillies in the last half of the ninth. Though there were two out, the tying run was on second and at bat was the fearful Ed Delahanty with the even more fearful Nap Lajoie on deck.

Griffith eyed Delahanty up and down, then looked at Lajoie. He scuffed his feet, rubbed up the ball, twitched his cap. Then he paced around the mound. Finally he walked Delahanty and pitched to Lajoie, who became the victim of a spectacular catch.

As Griffith walked to the clubhouse, he was accosted by the umpire. "What in the world were you thinking about, passing Delahanty to get to Lajoie?" asked the arbiter.

"I noticed," replied the pitcher, "that Delahanty was looking at the fences while Lajoie was looking at the infield set-up. I decided to pick the guy with the least ambitious look."

Milwaukee's general manager, Johnny McHale, claims that Humberto Robinson, who stands 6-1 but weighs only 148 pounds, is "so skinny he can take a bath in a double-barreled shotgun."

Contemplating a change in the dimensions of the pitching rubber, the American League asked the advice of its then greatest pitcher, Lefty Gomez.

"It makes no difference to me," shrugged Gomez.

"But it should," insisted one of the club presidents. "After all, your livelihood depends on where you stand on the pitching rubber."

"What do I care?" retorted Gomez. "I never fooled anyone with my feet."

Back in the days of the Yankees' Murderers' Row, Babe Ruth was known as a playboy while Lou Gehrig personified the All-American Boy.

Everyone who knew them was always asked if it were true they didn't get along. The famous umpire, Harry Geisel, would always answer the question in this fashion:

"If you come down to the hotel any night about 10:30, you'll always see them together. You'll see Lou comin' in and the Babe goin' out."

After retiring from the Yankees, Gerry Coleman confined his TV appearances to commercials. His young nephew, who had never seen him play ball, kept asking, "Did you really play for the Yankees?"

"Certainly," Coleman replied. "Why do you ask?"

"Well, everytime I see you on TV, you're either shaving or smoking."

Yogi Berra was explaining his after-dinner speaking difficulties to his friend, Jackie Farrell. "I'm always nervous at the start. But after a few words I'm okay."

"Well, Yogi," advised Farrell, "the mayor of the town is usually present and there's always the toastmaster. Why don't you get started by turning to the mayor on your right and saying, 'Mr. Mayor.' Then turn to the toastmaster on your left and say, 'Mr. Toastmaster.' That will get you started."

Berra pondered that one and then asked, "Yeah, but what happens if the mayor is on the left and the toastmaster on the right?"

Manager Casey Stengel has always been puzzled about Yogi Berra's innumerable foul-ball home runs. "He musta missed out on at least 30 homers last season. Each time at the last second the ball curved foul."

In due course, the eminent Perfesser concluded that it was a matter of stance. Berra had been standing improperly. So in spring training he changed the position of Berra's feet.

"How did it work out?" inquired a scribe.

"Why, you seen how remarkable it works," retorted Stengel. "Now Berra ain't even hitting any fouls."

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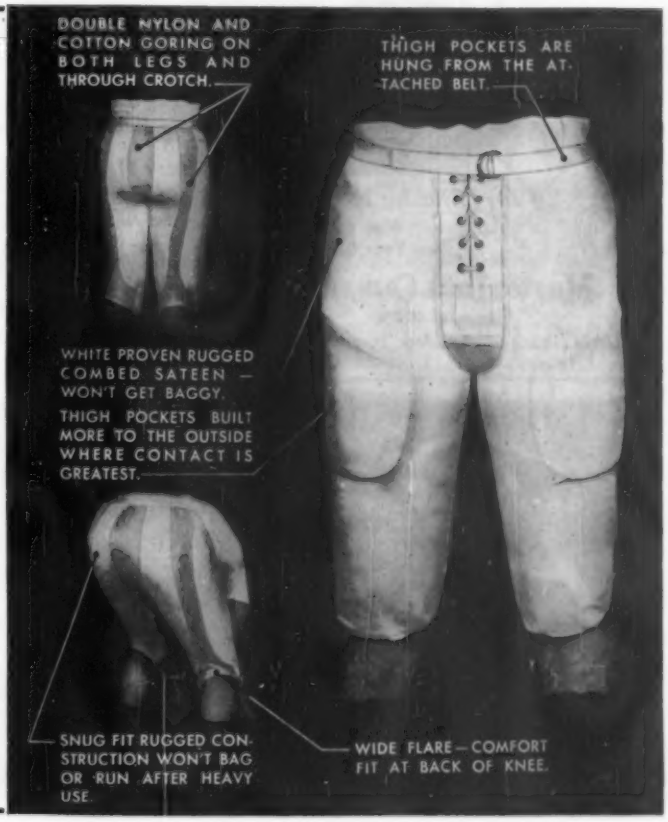
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THE POWERS MANUFACTURING CO., Waterloo, Iowa

"If Men in History **Had Spoken Like Baseball Managers" is the title of a witty column that Joe Falls wrote for the *Detroit Times:***

George Washington: Give me another left-handed oarsman and I'll get across the Delaware.

Jesse James: I'd like to see my guys steal more often this year.

Steve Brodie: The important thing is to get a big jump.

Thomas Jefferson: I'm sure the purchase of Louisiana is going to help us.

Abraham Lincoln: Boy, are we in a slump. When was the last time we made four scores—seven years ago?

Teddy Roosevelt: You can have your "holler" guys. Give me some one who speaks softly and carries a big stick.

Robert E. Lee: I think the Yankees can be beaten.

Stephen Foster: I like to see someone who can hum, especially if he's got the right pitch.

Thomas Edison: We could use some more power.

Chief Justice Warren: Our bench is stronger than ever.

Ulysses S. Grant: Of course it's important to win in the South.

Nathan Hale: Actually I don't think I'd care to go out on a limb.

Oh, those California track kids!—you can't beat 'em! Take the Huntington Beach High School invitational meet, for instance. Look at the performances it produced last May:

100 yd.—9.8; 220—20.8; 440—48.6; 880—1.55.9; mile—4.15.1; 880 relay—1.29.5; 120 high hurdles—14.1; 180 low hurdles—19.1; broad jump—24-1¼; high jump—6-6¾; shot put—55-5; and pole vault—13-10½.

Called the Southern Counties Track and Field Meet, the 1959 affair attracted 81 schools with 1,240 entries. Attendance was 3,000 and the net profit over $1,500. A smashing artistic and financial success, it must have been the top schoolboy meet of 1959.

The bright sports information director of Boston U. is no longer Lawrence Morton Strumwasser. It's now plain ol' Larry Strum. He had his name officially changed for the following reasons:

1. Practically everybody mispronounced it.
2. Nobody could spell it.
3. Strangers thought he was an alien.
4. His ball-point pen bill was enormous from signing letters.
5. Practically everybody called him "Strum" anyway.

Watching the 1958 Pro Football All-Star Game on TV, Frank Hinek Jr., Marquette University equipment manager, heard the announcer introduce Bill George of the Bears to the viewing audience.

Hinek turned to his wife and remarked, "That's the guy who killed the Green Bay Packers last season."

The voice of seven-year-old Bronk Hinek quickly interpolated: "Daddy, did he get jail for that?"

The Winged T

(Continued from page 11)

7 Man: Block man on or first man to your outside with pivot-block technique.

8 Man: Shorten, step to inside (same basic beginning movement of pulling) through hole between 7 man and 6 man, blocking the first opposition color you see.

138CTXX:

The quarterback takes his stance with his right foot back. He pivots on his right and places his left foot directly on the middle line. It's important to turn the shoulders parallel to the line so that the ball will be hidden from the right defensive end.

The quarterback's second step is made with his right foot and should be made to his right of the middle line. The quarterback hands the ball to the left half at *forearm's length* and fakes a bootleg past the right defensive end. The success of the play may depend on how well the quarterback conceals the hand-off to the left half, as it's our hope that the end will loosen to contain the quarterback.

The left half takes a lead step with his right foot directly at the fullback's position. He receives the ball on his left hip as he completes his third step. The long axis of the ball must remain parallel to the ground and not turn over as the left half takes two more steps before handing inside to the right half.

The second hand-off should occur behind the right guard at 3½ yards from the line of scrimmage. The left half rams a good fake at the defensive left end.

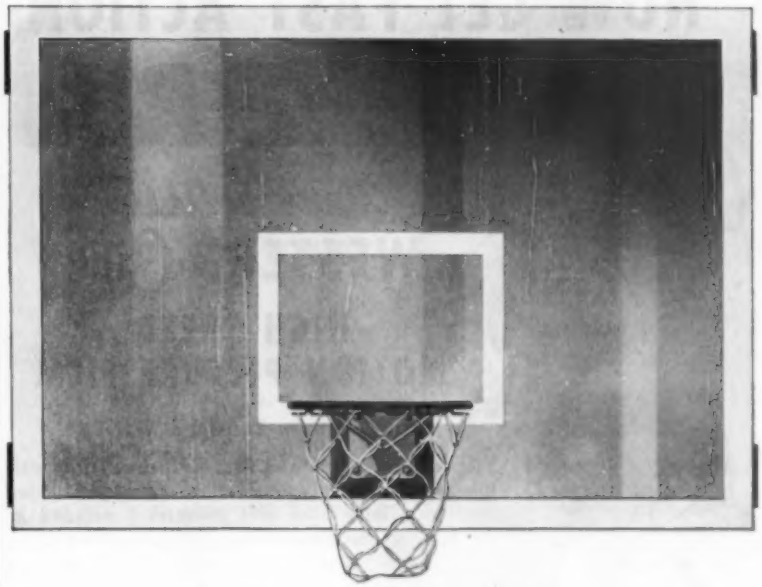
The right half takes a jab step with his right foot, then pivots on that foot as he steps back with his left. This left step should be pointed at the middle of his original deep back position. This step will give him late depth.

He should flatten his course parallel to the line as he crosses just in front of his original position. He receives the ball on his left hip and then bends his path directly at the tail of the left tackle, hugging the post lead block as he turns up field perpendicular to the line of scrimmage.

The fullback drives for the right tackle's right foot and blocks the first man that shows.

2 Man: Shorten, pull flat along the line of scrimmage heading for the tail of the 7 man. When you get to the hole, plant your outside (left) foot, dip your inside shoulder (right), pick up grass with your right hand (this will pull you into the hole), and wall off to the inside. If no one is to the inside, check over your left shoulder; if no one in the area, break for the goal post as a personal escort.

3 Man: Check-block the 2nd man on or outside #5. If the 2nd man is in the 3-4 seam, then use a pulling movement and the technique of a



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3. Only three holes for face plate bolts: heat-treated glass retains full strength.

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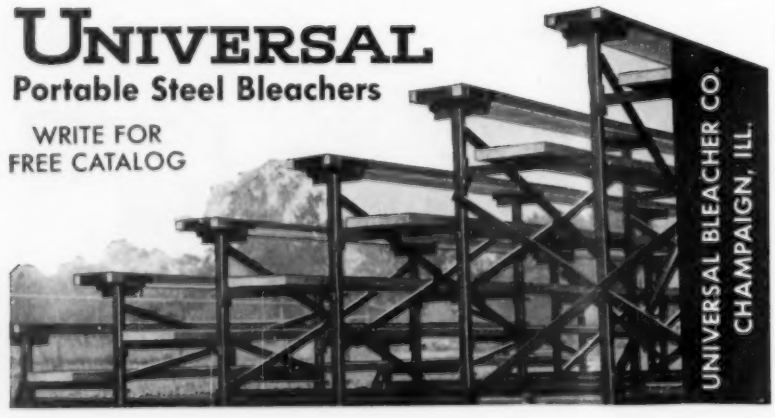


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running check. If the 2nd man is outside you, use a drop-leg check as the 2 man clears.

4 Man: Pull for the tail of the 7 man; gain at least one yard of offensive ground, get inside position and block inside-out on the first man on or outside the 7 man. The rule is to always expect to find the defensive man laying off the line of scrimmage or at least on; consequently we have to dig him out. Also expect him low and tough.

5 Man: Block man on, check area, or to your right. If no one is on you, be aware of cross-charges or stunts. If you're not threatened by a cross-charge or stunting man/men, then block a man to your right; prevent penetration.

6 Man: Gap-area-post. Block a man on your inside gap. If no one is in the gap, pop your right foot forward, bring your left up, be in a fundamental hitting position and check the area; don't allow penetration. If no defensive man is on the 7 man, then post a man on you.

7 man: Gap-post-lead. Block a man in your inside gap. If there's a man on you, execute a post block. If no man is on you and it isn't a gap situation, you then become the lead.

8 Man: Lead; if no one is on 7 or if men are in the 7-8 seam and the 6-7 seam, execute your lead post principle. The principle is: block first man to your outside. If there's a man on you and he's standing, head-fake and release as if running a pass route. However, if man is in a three-point or four-point stance, block the first man to your outside, after influencing the man on you.

•

Lh-Fb Spinner

(Continued from page 19)

ball over to the right hip, or simulation of it, when the halfback keeps.

This last maneuver must be completed just as the left foot is planted; otherwise, the ball will be exposed to the defense on the short side or, if the halfback keeps, a poor fake will result. It's also important that the right elbow of the fullback be pinned to his right side so as not to show the ball to the defense on the back side.

The fake must be executed with animation and superb acting and is continued for three or four steps beyond the halfback before the fullback breaks into full running stride.

In faking to the fullback, the halfback can either fake giving the ball with both hands or he can give the empty left hand, holding the ball close to his body with his right hand. In the latter case, if he's going to give the ball to the fullback, he should hand off with his inside or right hand. The preference of faking with the hand or the ball is

a matter of ball-handling philosophy.

As the ball is handed off to the fullback or kept, the halfback *continues* or goes into the second and last phase of his full spin. I use the word "continues" because the entire maneuver is executed as one continuous and well-coordinated action. This operation of the two backs is analogous to the turning of two gears, one moving clockwise and the other counter-clockwise.

Whether the ball is handed off or kept, the actions of the halfback must be the same. Let's assume that he has kept the ball after a quick short fake to the fullback with the ball. (Remember, he can also fake with the empty left hand.) The spin is now continued to the left with the center of gravity and appropriate weight shifted to the right foot and leg, which become the next pivoting point.

As he pivots to come around, the left hand and elbow come over the ball to conceal it more adequately and the upper portion of the body is lowered to aid the concealment. The left foot swings around to the left, with the shifting of the weight to the ball of the pivot or right foot, and is placed in advance and to the left of the pivot foot as the pivot is completed and the body squared away for the hole.

The halfback now drives for the opening with his head up, tail down, and arms over the ball. This completes the second and last phase of the full spin.

To sum it up, the general coaching points are as follows:

1. Balanced stance with weight accent on the initial pivot foot, except for the fullback.
2. Center of gravity over the legs —transferred to left or right, depending on pivot foot.
3. Depth of backs and lateral distance between them is important to the ball-handling, spinning, and faking.
4. Eyes on the ball.
5. Centering of ball to target area with accuracy and moderate speed.
6. Ball kept away from body and not pinned to it on spin.
7. Let the ball spin you around.
8. Execute the spin on the ball of the pivot foot.
9. Body posture of both backs must be maintained at the original vertical level to effect good faking. Can be lowered but not raised. Keep the head up.
10. Right leg and foot must be aligned with hole to be hit.
11. Halfback must not *fall or pull away* from faking back on his spin.
12. Ball pocket must be unobstructed.

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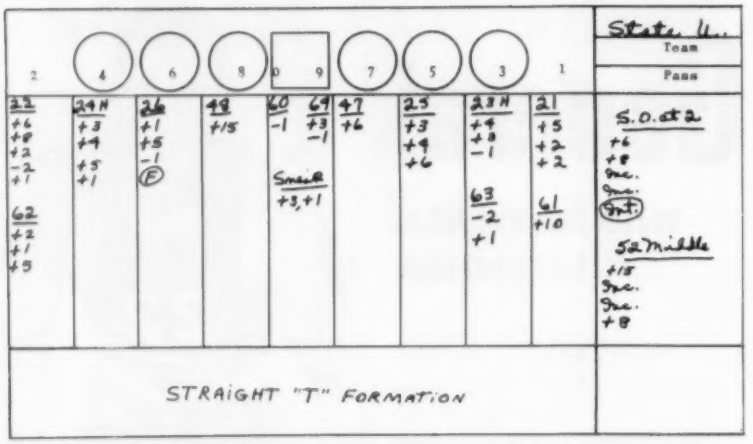
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FORM 2, the Separate Sheet Used for Analysis of Opponents' Straight T Formation; Plays Are Numbered According to LSU Hole Numbering System.

Game Preparation from the Master Sheet

By PAUL DIETZEL, *Head Coach, Louisiana State University*

ONLY the information that the scout can get across to the staff and squad is important, and this fact should be kept foremost in the mind at all times.

There has been a trend in recent years toward cutting down on the number of pages in the written scout report. This has become necessary because the amount of time spent on the practice field and in squad meetings has gradually been decreased. Football players today are being required to spend more and more time in the classroom and in preparation of their assignments.

Sunday afternoon at LSU is usually spent grading the game film. As soon as this task is completed, the staff turns to the job of breaking down the master sheet (see Form 1) for opponent analysis.

A separate sheet is used for each formation (see Form 2), and only plays run from that particular formation will appear on the sheet. These plays are recorded in our own numbering system by holes with the yardage gained.

Often a study of these formations will reveal that this particular formation is used only in long yardage situations. This is the type of data put to use by the defensive coaches in setting up their game strategy.

Another staff member will transfer all the information pertaining to hash mark and middle of the field position. Again the numbering system of LSU is used to record the plays by holes plus the yardage gained. A single sheet with Left, Right, and Middle of the field columns shows the entire picture.

On close study, this form will often show that an opponent runs a large percentage of their plays to the wide side of the field when on their left hash mark. LSU was able to use this type of information to a decided advantage several years ago while playing one of the nation's top ranked elevens.

Opponent Analysis: Still another coach will transfer all the information pertaining to down and distance from the master sheet. This form divides the plays into four classes: Normal, Long, Short and Waste.

It is up to each school to decide which down and distance situation will fall into the different categories. Time, score, and field conditions will sometimes have a bearing on the recording of these plays. Most clubs show definite tendencies on down and distance situations that can be put to use in planning defensive game strategy.

Addition Tabulations: When the forms on down and distance, hash marks, and formations have been completed, they are turned over to the defensive coaches for analysis. It is possible to make other tabulations from the master sheet, such as down and distance by yard line position. This will show the percentage of passes and runs from the different zones over the field and is valuable data in the hands of the defensive signal caller.

The pass plays can be listed in columns by downs in order to have some basis for prediction of the opposition's passing game. As a further aid in studying the passing game, the charting of all passes into zones will yield additional facts. No special forms are used for these last tabulations. This is information for the staff, and only the conclusions reached will be passed on to the squad.

The Defensive Summary: A separate sheet is used for each defense. The defense is listed by number and drawn at the top of each page. The page shows a complete football field with the five yard lines, goal lines, and hash marks.

The plotting of the down by down defenses consists of placing a dot on the sheet plus the down and distance to represent each defense. Shifting, stunting, and perimeter rotation is also noted here. A careful study of these sheets by the offensive coaches often produces some interesting facts as to when and where to expect certain defenses.

The sheets are not to be discarded immediately, as there are other uses

for these forms. The defensive scout squad learns the opponent's defenses each week from flash cards made up from these sheets. Strength and weaknesses of individuals are also recorded on these forms and the offensive coaches use all of this data in making up their game plans.

The Written Scouting Report at LSU is usually six or seven pages consisting of a couple of sheets on personnel, one on formations, one on tendencies, one on unusual running plays, one on the passing game, and one on defenses.

All coaches pitch in and help get this out by noon Tuesday. The scout will usually have the first two sheets made up from prior information. The defensive coaches take care of the sheets pertaining to formations, tendencies, and plays while the offensive coaches turn out the defensive sheet.

Presenting the Information to the Players: A large 30' x 40" cardboard bulletin is placed on the wall outside of the players' dressing room on Monday. This bulletin contains general information, such as pictures, clippings from newspapers, and all types of information concerning Saturday's opponent. The scout has taken much of this information from his file and probably has been working on this board for a week or ten days in his spare time.

DRESS IN SWEATSUITS

The playing squad of approximately thirty-six men dress in sweats on Monday and go to the movie room for the first look at their new opponent. The coach responsible for the scouting of the opponent is in charge and will spend forty-five minutes showing film to the group.

This is a fine time to bring out important points that will be emphasized throughout the week. By reversing the picture, each detail can be clearly illustrated. An oral scouting report of approximately fifteen minutes follows the movie.

At a noon meeting on Tuesday, the written report is given to the dress out squad. Each player writes his name on his report, as the reports are to be returned at the pre-game meal. The scout will go over the report in detail, page by page, and attempt to answer any questions asked by the squad at this time. This meeting never lasts more than twenty minutes.

At 3:30, movies are started for early arrivals and will continue until time for the squad to report on the practice field. Specialty men leave the movie early and therefore see only a portion of it. Players with five o'clock classes will not be able to see any of the pre-practice movies.

WEDNESDAY NOON MEETING

There is another noon meeting on Wednesday. The squad is divided into groups, with each staff member taking a group. In these meetings much of the material on the scouting report will be reviewed. These groups will work on all phases of the game—offense and defense. Films are again shown in the movies room for those players not attending late classes. Some of the men not available for the movies on Tuesday may be able to attend on Wednesday.

There is no noon meeting on Thursday because of military drill, but there is a film showing scheduled before Thursday practice on the field. This is the only direct tie with scouting informatoin other than the usual instructions given each day on the field.

During the week a short summary of the written scout report is prepared. It is given to the dress out squad at noon Friday. This summary has the five following divisions:

1. General Axioms.
2. Kicking Game.
3. Ground Game.
4. Air Game.
5. Defense.

These summaries are to be turned in at the pre-game meal along with the scouting report.

OFFENSIVE MASTER SHEET

State U
GAME

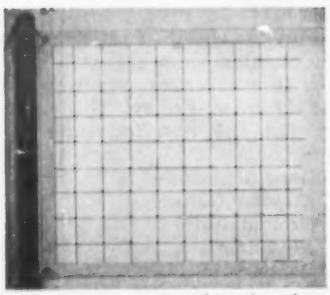
PLAY NUMBER	DOWN	DISTANCE	HASH	POSITION	FORMATION	PLAY	DEFENSE	GAIN
1	1	10	L	-25	S	22	50	+8
2	2	2	M	-33	S	QBS	88	+3
3	1	10	M	-36	S	61	50	+10
4	1	10	R	-46	S	60	50	-1
5	2	11	R	-45	S	21	70	+5
6	3	6	L	+49	S	26	50	(R) lost ball
7	1	10	R	-30	S	23H	70	+4
8	2	6	M	-34	S	24H	70	+4
9	3	2	M	-38	S	25	50	+6
10	1	10	L	-44	S	22	80	-2
11	2	12	L	-42	S	S.O. at 2	80	+6
12	3	6	M	-48	S	23H	60	+3
13	4	3	M	+49	Spread	Punt	—	45 yards
14	1	10	M	-40	S	63	80	+1

FORM 1, the Offensive Master Sheet Which Is Later Broken Down for a Detailed Analysis of the Opponents' Play

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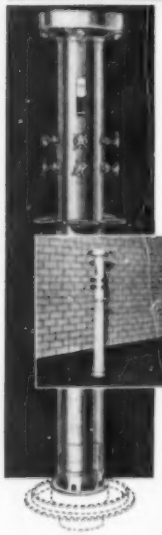
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Bradley Column Showers without separating panels and curtains are widely used in men's and boys' shower rooms. Being so economical to install, ample bathing facilities can be provided at low cost.

For the girls, Group Shower Units are usually equipped with both stall separating panels and curtains.

To arrive at the number of Bradley Multi-Person Showers required, the practical formula is to figure 40 total users for each 5-stall unit.

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Where center of room space is not available, shower units may be located close to wall and supplied with 3 shower heads instead of 5. Placed in corner, they provide for two.



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BRADLEY multi-person showers

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Split-Second Timing for the PASS and PUNT

REMEMBER when Rudy Vallee used to croon "My time is your time"? Probably was way before your time. Anyway, our more scientific-minded football coaches have adopted the thought for their instruction on punting and passing.

It isn't enough to practice the mere mechanics. To work to perfection, every facet of the punt and pass must be executed with exquisite *timing*.

Perhaps the "Mr. Bulova" of the football world is Alabama's famous coach, Paul "Bear" Bryant. A master organizer, with great fidelity to detail, the Bear is noted for his split-second timing of the punting game.

Upon solicitation from *Scholastic Coach*, he passed along this little gem on defensive kicking:

"Here at the University of Alabama, our work on the defensive kicking game starts during our 'specialty period'. This takes place 20 minutes before the squad reports for practice, and includes our kicker, passers, and centers.

WORK TOGETHER

"Our centers and kickers work together, with a coach watching their every move. This coach makes certain that the kicker takes his proper depth, then checks the center's snap and the kicker's action in kicking the ball.

"While this is taking place, I usually take a stop-watch and time the whole operation. First, I time the center's snap. We try to develop our centers to the point they can get the ball to our kicker in 0.6 of a second; however, it usually takes 0.7.

"After timing the center's snap, I put the stop-watch on the kicker. We try to have our kickers get the ball away in 1.2 seconds. This is from the time the ball touches the kicker's hands until it leaves his foot.

"Our next step is to time the whole operation—from the time the center moves the ball until the ball leaves the kicker's foot. We think that if we can get the whole operation down to only 1.9 seconds—with our kicker starting at the depth of

13 yards—we will never get a kick blocked.

"Our kickers are instructed to put the ball high in the air. We like the ball to stay in the air over 4 seconds. But 4.5 seconds is good. We much prefer a very high 40-yd. kick to a low line drive 60-yd. kick. Of course, if we can get a very high 60-yd. kick, we'll take that.

"One reason for a high kick is that it gives us plenty of time to cover. If we're able to get our coverage set up, then we don't believe anyone will break away for a long return. A long, low kick gives the ball-carrier time to start running and get the coverage spread out."

Insofar as the passing game is concerned, Weeb Ewbank of the Baltimore Colts can take a bow in the stop-watch department. He has his aerial attack timed to split-second perfection. But let his fabulous quarterback, Johnny Unitas, tell it:

"I like to get toe to toe with my center. All right, the play is now on and I'm taking the ball from center. I take a full step back with my right foot, a cross-over step with my left, and another full step with the right.

"I'm now straightened up with my throwing arm cocked. I'm 7 yards behind the line of scrimmage and I've used up 1.2 seconds. We figure that the quarterback should need protection up to 2.5 seconds. So now I've got 1.3 seconds to get rid of the ball.

FLIGHT TAKES A SECOND

"The ball is in flight for 1 second, if it's not too long a pass. It should be in the receiver's hands at 3.5. If it isn't, we're not throwing the right distance for that particular play.

"That will be corrected in practice. If the end is arriving on target too soon, giving the defense time to close in on him, the play will be changed from an 8-yard pass to 10 yards or 12, until it seems to synchronize."

What if the defense breaks through in less than 2.5 seconds? "Sometimes they do, and I'm on my back. But that's rare, with our offensive line. They're so good that if it's an option pass and I want time to look for the best target, I'll have as much as 6 seconds. That gives me time to look straight ahead, left, right, and back to the left again."

Unitas likes to grip the laces with just two fingers, where some passers use three or even four. He puts his last two fingers on the laces, stretching his thumb, forefinger, and middle finger around toward the back of the ball.

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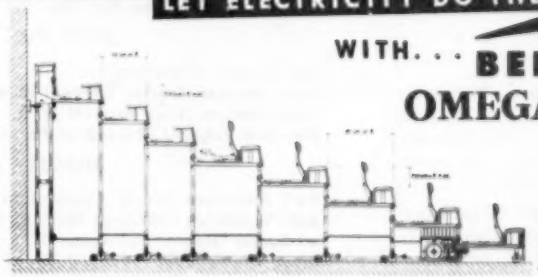
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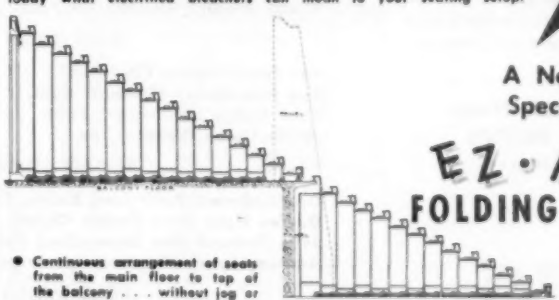
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All-American High School Track Team

• Four national record breakers and six 1958 repeaters lend luster to *Scholastic Coach's* 9th annual four-deep All-American, arrayed here in alphabetical order.

The caliber of the 1959 Team may be gleaned from this statistic: *No fewer than 36 of the 45 selectees are ranked among the top 25 for their events on the all-time high school list!*

State honors were won—as usual —by California with 20 of the 52 spots, followed by Texas with 5 and Oregon and New Jersey with 4 each.

Compiled by DON NASH and FRANCIS ERROTA
Track and Field News

1959

	Best Mark
100 YARDS	
John Howard *(San Bernardino)* Calif.	9.6
Bill Kemp *(Carter-Riverside)* Ft. Worth, Tex.	9.5w
Arnold Tripp *(Crawford)* San Diego, Calif.	9.6
Hubie Watson *(Jordan)* Los Angeles, Calif.	9.5
220 YARDS	
Henry Carr *(Southwestern)* Detroit, Mich.	20.8w
Pat Mitchell *(Gainesville)* Tex.	20.5w
Stan Rhodes *(Hoover)* Glendale, Calif.	20.8
Hubie Watson *(Jordan)* Los Angeles, Calif.	20.8
440 YARDS	
Leroy Burchett *(Boys)* Brooklyn, N. Y.	48.6
Dixon Farmer *(Miramonte)* Orinda, Calif.	47.3n
Dave Kirkman *(Edison)* Tulsa, Okla.	48.3
Bill Stoddard *(Marshall)* Oklahoma City, Okla.	47.9
880 YARDS	
Ted Abrams *(Grant)* Portland, Ore.	1:54.1
Dick Davis *(Poly)* Long Beach, Calif.	1:53.4
Dave Dunbar *(Westmoor)* Daly City, Calif.	1:53.2
Archie San Romani Jr. *(Wichita East)* Kans.	1:54.4
ONE MILE	
Jack Hudson *(El Cajon)* Calif.	4:16.7n
Archie San Romani Jr. *(Wichita East)* Kans.	4:08.9n
Dale Story *(Orange)* Calif.	4:11.0
Ralph Trimble *(Jefferson)* Cedar Rapids, Ia.	4:16.7
120 YARDS HIGH HURDLES	
Warren (Rex) Cawley *(Farmington)* Mich.	13.9
Herman Johnson *(Plainfield)* N. J.	14.1
Steve Pauly *(Beaverton)* Ore.	13.8
Mel Renfro *(Jefferson)* Portland, Ore.	13.9n
180 YARDS LOW HURDLES	
Dee Andrews *(Poly)* Long Beach, Calif.	18.9
Warren (Rex) Cawley *(Farmington)* Mich.	18.3w
Dixon Farmer *(Miramonte)* Orinda, Calif.	19.1
Pat Mitchell *(Gainesville)* Tex.	18.1w
SHOT PUT	
Lee Carlson *(Dubuque)* Ia.	60-½
Gary Gubner *(DeWitt Clinton)* New York, N. Y.	61-3
Frank Mazza *(Long Branch)* N. J.	60-8
Harrison Rosdahl *(Ridgefield Park)* N. J.	61-8
DISCUS	
Karl Johnstone *(North Phoenix)* Ariz.	194-5
Bob Middleton *(Harding)* Marion, O.	184-6
Al Santio *(Hope)* Providence, R. I.	167-1¼
Cloyd Webb *(East St. Louis)* Ill.	173-11
JAVELIN	
Edward Red *(Lafayette)* La.	214-3½
Dan Studney *(Hillside)* N. J.	213-4
Fenton (Pete) Talbott *(McPherson)* Kans.	222-10
Glenn Winningham *(Grants Pass)* Ore.	225-6½
HIGH JUMP	
Joe Faust *(Culver City)* Calif.	6-8
Ray Nickelberry *(Oxnard)* Calif.	6-8
Paul Stuber *(Bellflower)* Calif.	6-8
Jackie Upton *(Vernon)* Tex.	6-7
BROAD JUMP	
Dee Andrews *(Poly)* Long Beach, Calif.	24-2½
Dudley Haas *(Ray)* Corpus Christi, Tex.	25-1¾w
John Howard *(San Bernardino)* Calif.	24-2½
Anthony Lorick *(Fremont)* Los Angeles, Calif.	24-8
POLE VAULT	
Jerry Armon *(West)* Phoenix, Ariz.	14-0¾
John Cramer *(Mt. Vernon)* Wash.	14-3
John Rose *(Hoover)* Glendale, Calif.	14-1
Bob Looney *(Santa Barbara)* Calif.	13-8¾

THE 1959 ALL-AMERICAN H. S. TRACK TEAM

THE greatest high school track and field team in history! That statement can pertain only to *Scholastic Coach's* ninth annual mythical All-American spike squad.

Although the team is chosen on consistency of performances and competition, rather than a single outstanding effort, five members of the 1959 squad set all-time high school bests and no less than 36 (39 spots) of the 45 competitors are ranked among the top 25 for their particular event on the all-time prep list!

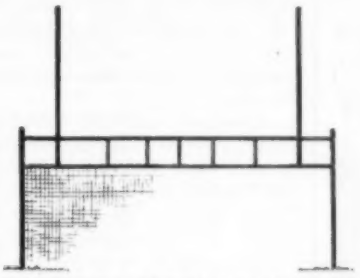
Two of the selectees have been credited with National Federation Interscholastic records while two others are awaiting approval after surveyor's certificates have been examined.

Record breakers include *Steve Pauly* of Beaverton, Ore., :13.8 over the high hurdles, and *Dale Story*, Orange, Calif., 4:11.0 in the mile. Awaiting approval are *Glenn Winningham*, Grants Pass, Ore., 225 ft. 6½ in. in the javelin, and *Karl Johnstone*, North Phoenix, Phoenix, Ariz., 194 ft. 5 in. with the discus.

Johnstone, the third boy in as many years to give his school a national record, heads a list of six repeaters from last year's All-American group. Others are Winningham, *Archie San Romani Jr.*, Wichita East, Wichita, Kans., and Californians *John Rose*, pole vaulter from Glendale Hoover, and high jumpers *Paul Stuber*, Bellflower, and *Ray Nickelberry*, Oxnard.

Two of the greatest athletes in prep track annals oddly enough were not credited with national marks. San Romani ran a 4:08.9 mile while beating Story in the Compton Invitational, but had a best of "only" 4:13.6 in regular high school competition. He also makes the team in the 880 off his best of 1:54.4 and a 1:56.9 after running a 4:10.0 mile in the Missouri Valley AAU meet, best distance double ever by a prep. He's the son of the former great distance runner from Emporia State in Kansas.

Warren (Rex) Cawley of Farmington, Mich., established three all-time bests for preps and equalled another in post-season meets. He ran 200-meter hurdles around a turn in :23.0 and clocked :51.5 and



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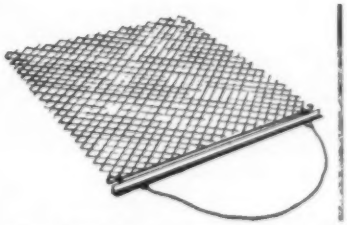
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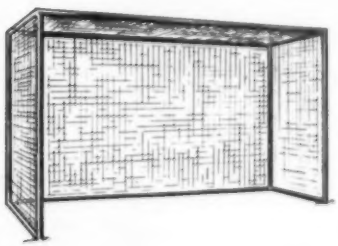
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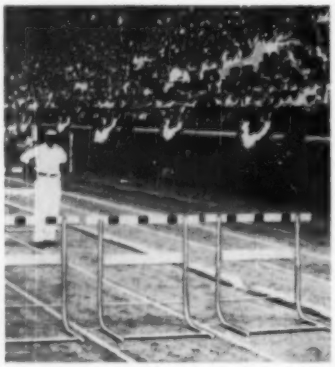
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:51.3, respectively, for the 440-yard and 400-meter intermediate hurdles. He equalled the high hurdles (42") mark of :14.1 and placed in all three events during the National AAU meet.

Cawley ran consistently good hurdle races during high school competition and equalled the former Interscholastic mark of :13.9 in the high barriers. He also had a legitimate :18.9 in the 180-yard low sticks and wind clockings of :13.8 and :18.3. He was the only high school boy to earn an AAU tour to Europe the past summer.

Other standouts on this team, though not necessarily in order given:

1. *Johnstone.* Third super star in three years developed by Coach Verne Wolfe. Johnstone only 5-10 and 175 pounds, whirled the college weight discus 169 ft. 3 in. in addition to his great flip with the lighter high school platter. Previous North Phoenix record wreckers were Jim Brewer (15-0) vaulter and Dallas Long (69-3) shot putter.

2. *Story.* Ran his 4:11.0 mile in California State meet, a race which saw the sixth place boy run 4:19.4. Story clocked under 4:20.0 on six occasions and early in year ran two miles in 9:28.2. Also had 1:53.1 relay leg for 880. He's only 5-9 and 130 pounds.

3. *Winningham.* Did 225 ft. 6½ in. in midseason and was consistently over the 210 ft. mark. Right behind Winningham on year's rankings came Fenton (Pete) Talbott, McPherson, Kans., whose 222 ft. 10 in. toss is just three-quarters of an inch shy of the second best ever on the all-time list.

4. *Pauly.* Ran his :13.8 in Oregon State meet and just barely nudged Mel Renfro, Jefferson of Portland junior who did :13.9. Renfro had beaten Pauly in one earlier meeting, but Pauly won the big one.

5. *Pat Mitchell.* Gainesville, Tex. Ran 180-yard low hurdles in wind assisted :18.1 and did :18.4 with a slight aiding breeze. Also ran sprints in :09.4 and :20.5 with aid of wind. This talented junior is rated one of best prospects ever to come out of Texas.

6. *Dixon Farmer,* Miramonte, Orinda, Calif. Has posted good times in every track event and also is a fine broad jumper. Is two-time California 440 champ and posted a :47.3 for 400-meter dash in National AAU meet. Also state low hurdles king where he ran :19.1 into a wind. Has :23.1 best for 220-yard lows and did :52.9 for 400-meter barriers. Won National Pentathlon crown early in summer.

7. *Hubie Watson,* Jordon, Los An-

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geles, Calif. Won both sprint titles in state meet and also beat field of collegians in Compton Invitational 100 with a :09.6. Only a junior, Watson had best times of :09.5 and :20.8. Makes SCAA in both sprints.

8. *Stuber*. Most consistent of three amazing California high jumpers. He cleared 6 ft. 8 in. twice, 6 ft. 7 in. or a fraction on four other occasions, and in seven other meets did 6 ft. 6 in. and/or a fraction. Joe Faust, Culver City, did 6 ft. 6 in. or better on seven occasions, and Nickelberry of Oxnard matched such efforts in four meets. All had at least one jump at 6 ft. 8 in.

The 1959 season provided an outstanding batch of truly great athletes and it's a shame only a few can be mentioned. One boy who would have rated many headlines in any previous year is *Bob Middleton*, southpaw discus thrower from Harding High in Marion, O. Middleton did 184 ft. 6 in., second on the all-time list ahead of still official record holder Al Oerter (184 ft. 2¾ in.).

THREE-EVENT WONDERS

Another interesting development was the emergence of many three-event wonders, boys who not only won three events in nearly every meet, but who recorded top feats in each. Cawley, Mitchell and Farmer were among these; and Poly in Long Beach, Calif., produced *Dee Andrews* who was remarkably consistent in the hurdles and broad jump. Competing much of the year with a bad leg, Andrews had bests of :14.1, :18.9 and 24 ft. 2½ in.

Others in triple-event category included *John Howard*, sprinter-broad jumper from San Bernardino, Calif., (:09.6, :20.6w, :21.0 and 24 ft. 2½ in.), and *Arnold Tripp*, Crawford of San Diego, sprinter-broad jumper (:09.6, :20.5w, :21.1 and 24 ft. 9 in.).

Seven competitors made this All-American team in two events. They are Cawley, San Romani, Watson, Andrews, Farmer, Howard, and Mitchell.

One of the rarities on the team is sprinter *Henry Carr* of Southwestern in Detroit, Mich., who makes the squad as a sophomore. He clocked :21.0 and also boasts a wind-aided :20.8 in the 220.

Mitchell and Watson are two of five juniors making the selections. Other junior classmen are high hurdlers *Herm Johnson* of Plainfield, N. J., and Renfro,. and shotputter *Gary Gubner* of DeWitt Clinton in New York City. Johnson did :14.1 over prep barriers and :14.2 over 42-inch hurdles.

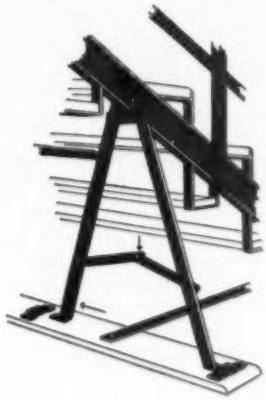
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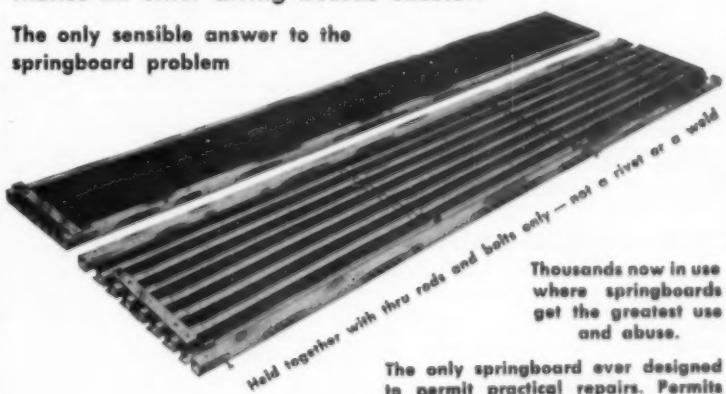
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• *THE MODERN SHORT PUNT: A WINNING FORMATION. By Lou Thom Howard. Pp. 181. Illustrated. Englewood Cliffs, N. J.: Prentice-Hall, Inc.*

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• *THE COMPLETE KICKING GAME — MECHANICS AND STRATEGY. By Donald E. Fuoss. Pp. 300. Illustrated—drawings, diagrams and photos. Englewood Cliffs, N. J.: Prentice-Hall, Inc. $5.65.*

AMAZING is a mild word with which to describe Don Fuoss. A hugely successful coach on the small-college level, now turning out miracles at East Orange (N.J.) High, he's even more adept behind a typewriter.

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Anyone interested in any phase of the kicking game will find precisely what he's looking for somewhere in this book. It's really the last word on the subject.

• *TRACK AND FIELD FOR COACH AND ATHLETE. By Jesse P. Mortensen and John M. Cooper. Pp. 246. Illustrated. Englewood Cliffs, N. J.: Prentice-Hall, Inc. $4.95.*

FELICITOUS indeed is the Southern Cal. collaborating team of Jess Mortensen and John Cooper. A former national javelin and decathlon champion, Jess is now one of the country's coaching titans; while Cooper is a physical education professor famous for his painstaking research, learned papers, and work with motion pictures.

The result is a wonderfully practical text for coaches on all levels of competition. The book suggests enormously helpful ways of uncovering potential performers, analyzes the mechanics of top athletes, offers detailed workout schedules for every event, expounds the best known ways of performing each event, summarizes the latest research findings, and presents sequence drawings of champions in each event.

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Part 3, Hurdles, covers the highs, lows, and 400-meter hurdles.

Part 4, Jumps, expounds the broad jump, hop-step-jump, high jump, and pole vault.

Part 5, Weights, elaborates on the shot, discus, and javelin.

Thoroughly practical, excellently organized, and graphically written, the book furnishes a superb coaching and training guide for both coach and athlete.

• *WEIGHT TRAINING FOR FOOTBALL. By Elvan George and Ralph Evans. Pp. 150. Illustrated—drawings. Englewood Cliffs, N. J.: Prentice-Hall, Inc. $4.50.*

AT fabulous Ada (Okla.) High School, Coach Elvan George has been using weight training for eight years. In that time, his clubs have annexed *six state titles while winning 90 out of 97 games!*

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In this book Coach George and Ralph Evans, a former weight training champion who helped organize the Ada weight program, detail the program in full. And what a splendid program it is.

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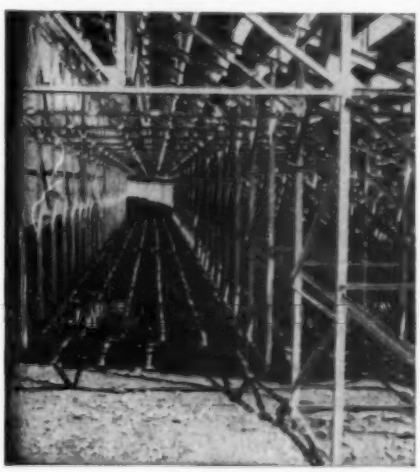
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- *THE KINESIOLOGY OF WEIGHT LIFTING. By Massey, Freeman, Manson, and Wessel. Pp. 175. Illustrated—photos and drawings. Dubuque, Ia.: Wm. C. Brown Co. $3.25.*

WITH weight lifting rapidly becoming an indigenous part of the physical education and sports training programs, this book fills a most timely need. Excellently organized and splendidly written, it covers thoroughly all the pertinent aspects of America's fastest growing training device.

Specific subjects covered include: Weight lifting (answers to frequently asked questions), background, the human machine (structure and function of the body), and the physiological basis of weight training and conditioning.

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Coaches, physical educators, and students will find this book a most valuable guide to the basic facets of weight training, competitive lifting, and conditioning for athletics.

- *1959-60 SEAL-O-SAN BASKETBALL COACHES DIGEST. Prepared and distributed by Huntington Labs. Pp. 64. Illustrated. Free to coaches; 50¢ to others.*

ABSOLUTELY superb is Seal-O-San's 19th annual collection of the finest technical basketball articles of the year. Culled from Scholastic Coach and other outstanding athletic periodicals, this big, handsome compendium features 23 technical articles contributed by such great hoop personalities as Eddie Hickey, Pete Newell, Phil Woolpert, Dolph Schayes, Johnny Bach, Harold Bradley, and Stan Watts, among others.

- *SOFTBALL, WITH OFFICIAL RULES (3rd Edition). By Arthur T. Noren. Pp. 142. Illustrated. New York: The Ronald Press Co. $2.95.*

WITH text and photos, this guide for beginners explains the fundamentals of the game with particular emphasis on the underhand style of pitching which more than any other feature differentiates softball from its parent, baseball.

The rules have been brought completely up to date in this third edition, and also included is an invaluable section on softball field equipment and its construction.

Miscellaneous

- *Education Through Physical Activities* (3rd Edition). By Pattric Ruth O'Keefe and Anita Aldrich. Pp. 377. Illustrated. St. Louis: The C. V. Mosby Co. (Extremely helpful volume for elementary school administrators and classroom teachers.)

- *How to Make Fishing Lures.* By Vlad Evanoff. Pp. 108. Illustrated—drawings. New York: The Ronald Press Co. $3.50. (Step-by-step construction and assembly of almost every type of lure used in fresh- and salt-water fishing.)

- *Application of Measurement to Health and Physical Education* (3rd Edition). By H. Harrison Clarke. Pp. 528. Illustrated. Englewood Cliffs, N.J.: Prentice-Hall, Inc. $6.95. (A thorough revision in accordance with the most recent research, with 95 batteries or evaluating instruments which may be used directly from the text.)

- *Best Sports Stories 1959* (With the Year's Best Sports Photographs). Edited by Irving T. Marsh and Edward Ehre. Pp. 336. New York: E. P. Dutton & Co. $3.95. (An absorbing panorama of the 1958 sports year, including 48 of the top newspaper and magazine articles, the champions of all sports, and 30 of the best pictures.)

- *A New Look at YMCA Physical Education.* By Richard E. Hamlin. Pp. 220. New York: Association Press. $5. (Classification and interpretation of essential information on the YMCA's health, physical education, sports, and recreation program.)

- *Youth and Fitness, a Program for Secondary Schools.* Report of the National Conference on Fitness of Secondary School Youth. Pp. 74. Washington, D.C.: AAHPER. $1.50. (Concrete recommendations on requirements in health and physical education).

- *Answers to Health Questions in Physical Education.* Pp. 24. Washington, D.C.: AAHPER. 50¢. (Definition of health responsibilities of coaches and physical educators, prepared through joint efforts of AMA and NEA.)

- *Table Tennis.* By Ken Stanley. Pp. 108. Illustrated. New Rchelle, N.Y.: SportShelf, P.O. Box 634. $3.25. (Complete technical analysis of the game, supplemented with fine photos and drawings.)

- *1959 Official NCAA Football Guide.* $1.

- *1960 Official NCAA Basketball Guide.* $1.

(Official rules, schedules, reviews, photos, etc. Order from The National Collegiate Athletic Bureau, Box 757, Grand Central Station, New York 17, N.Y.)

- *Instructions to Young Golfers.* By David Thomas. Pp. 126. Illustrated. New Rochelle, N.Y.: SportShelf, P.O. Box 634. $3.75.

All-American Track

(Continued from page 75)

California places as many as three boys in three events, the 100, high jump and broad jump. Andrews and Howard bettered 24 ft. three times in the broad jump, but the most consistent was *Anthony Lorick*, Fremont of Los Angeles who surpassed 24 ft. on six occasions. He had a best of 24 ft. 8 in. *Dudley Haas* of Ray High School in Corpus Christi, Tex., had the year's best leap of 25 ft. 1¾ in., but his effort was aided by wind. He had two others over 24 ft.

Dave Dunbar, Westmoor of Daly City, Calif., had the season's best 880 time with a 1:53.2 in the state meet, and *John Cramer*, Mt. Vernon, Wash., led pole vaulters with a 14 ft. 3 in. leap in the National AAU. His jump was the second best on the all-time list.

The selection of *Al Santio* may be questioned, since he wasn't at the top of the high school discus list. But that was due to the fact that the college weight disc is used in Rhode Island and he had little opportunity to throw the lighter platter. His best competitive effort with the college disc was 161-5¾, and he has thrown 178' in practice. He's the biggest boy on the Squad at 6-7 and 240 lbs., and is definitely an Olympic prospect.

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Oregon and its northwest neighbor, Washington, continue to show phenomenal improvement in their overall efforts. Florida, though not represented on this team, also displayed good progress in track and field.

Through the years, California has landed 144 places on SCAA teams and Texas 48. New Jersey hiked its total to 35 and New York, with two spots, overtook Pennsylvania for the fourth spot with 26 places. Pennsylvania has fifth place with 25, with Arizona right behind with 24. Kansas and Oregon boast 19 each and Illinois 16.

Poly of Long Beach, Calif., placed two boys in three spots and Hoover of Glendale, Calif., landed two athletes in as many places.

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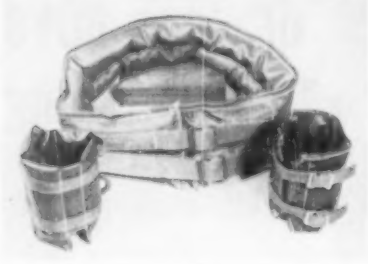
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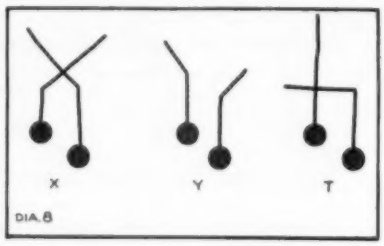
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Multiple Simplicity

(Continued from page 22)

tackle. The right wingback cleaned up to the inside, except on reverses where he led to the outside.

The pass patterns from the 200 formation were very simple. We had 10 patterns, but the receivers had to learn only three. One of the pass patterns was the wing T 48 pass—now called the 248 pass. The other nine patterns were left side and right side combinations of three basic patterns named after the movements of the end and wingback on the same side of the line.



In **Diag. 8**, the X pattern consists of a cross between the wingback to the sideline behind the linebackers and the end deep to the inside; the Y pattern flares the wingback to the inside behind the linebackers and the end deep to the outside; the T pattern sends the wingback behind the linebackers with a right angle cut to the sideline and the end straight down and deep.

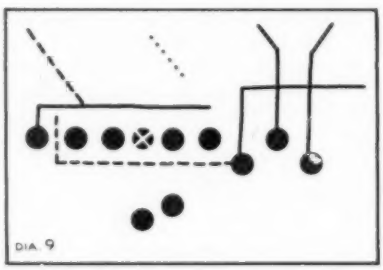
The particular combination of right and left side patterns would be determined by the signal caller in the huddle. For example, "200 left X, right Y," indicated that the left end and wingback ran the X pattern while the right end and wingback ran the Y pattern.

Our third formation was an overshifted spread either to the left or right. We called this the 100 formation. All plays were numbered the same as in the other formations, except the play was prefixed with the number 100 and the direction of the strong side was added. In this formation, the strong-side end split five yards while the weak-side end remained tight. The inside wingback split the difference between end and tackle one yard back from the line, while the outside wingback set up one yard out from the end and one yard back. The fullback remained to the right of the tailback when the strong side was left.

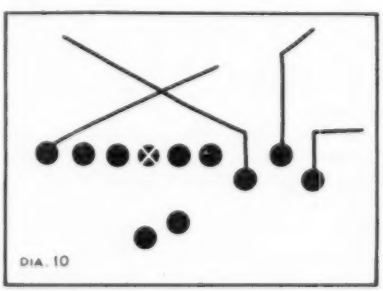
This formation was also primarily a passing formation and while it didn't spread the defense as much as the 200 formation, it had the advantage of flooding defensive zones with pass receivers, enabling us to outnumber defenders. For our running game, this formation gave us more running room to the weak side.

We had five pass patterns from the 100 formation, but one of the patterns was the 48 pass—now called the 148 pass. The basic pattern was called 100 A. The end and outside wingback went down eight yards, the end flaring in and the wingback flaring out. The inside wingback went down behind the linebackers and cut at right angles to the outside. The weak-side end came across center in front of the linebackers.

The 100 B pattern was the same as 100 A except the weak-side end stopped his cut across center, reversed direction and cut diagonally for the sideline. The 100 flat pass pattern was also the basic 100 A except the inside wingback cut behind the line into the weak-side flat area.



Diag. 9 illustrates these patterns—the solid lines show the 100 A pattern, the broken line is the weak side-end pattern in 100 B, and the dotted line represents the inside wingback pattern in the 100 flat pass.



The 100 C pattern, as illustrated in **Diag. 10**, is used to vary 100 A. The inside wingback crosses with the weak-side end, the strong-side end flares to the outside long, and the outside wingback goes down

short and cuts at right angles for the sideline.

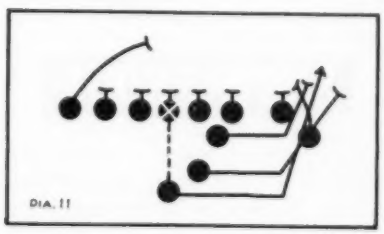
The backfield patterns on running plays are exactly the same for the 100 as they are in the 200 formation. Interior line blocking is the same. Weak-side end blocking is identical with end blocking in the 200 formation.

On plays to the strong side, the inside wingback blocks the man on him or the nearest linebacker to the hole *inside of him;* the end blocks the man on him or the nearest *defensive halfback inside of him;* and the outside wingback blocks the man on him or the nearest man *outside of him.* On weak-side plays, the wingbacks and strong-side end become downfield blockers.

The final formation in our multiple offense was the single wing. This was primarily a running offense to supplement the wing T. As in the wing T, the only pass pattern employed was the 48 pass. This pass was thrown off the power pattern (single wing 48 pass) and off the buck lateral (buck lateral 48 pass).

Running plays were numbered the same as in the wing T except they were prefixed by the identification, single wing, and the direction of the power side was added. The backfield running pattern on single wing right was the same as the running pattern of the 200 formation, except the blocking back led the blocking into the even holes. Single wing left reversed the above pattern.

Interior line blocking on single wing right was by the rule, except on plays into the 4 and 6 holes on the strong side and the 5 and 7 holes on the weak side where two-on-one blocking was employed. The tackle and end double-teamed at the 4 and 5 holes while the end and wingback double-teamed at the 6 and 7 holes.



Diag. 11 illustrates single-wing blocking and the back pattern on single wing 46 right.

To add deception to the single-wing attack, we used the standard buck lateral, buck lateral reverse, and buck lateral pass. The buck lateral series followed our standardized signal system—the buck lat-

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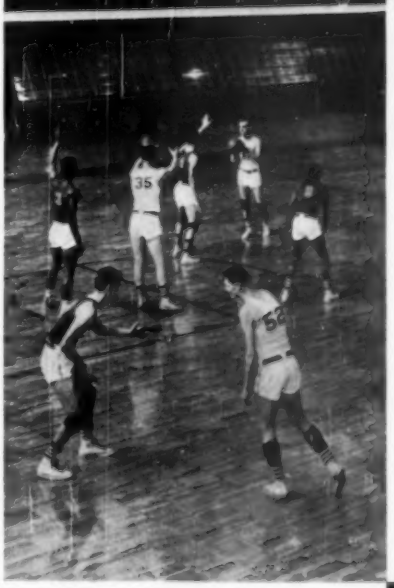


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erals were called buck lateral 48 when the power was right or buck lateral 49 when the power was left, the buck lateral reverses were called buck lateral 23, 25 or 29 when the power was right or buck lateral 22, 24 or 28 when the power was left, and the pass from this series was buck lateral 48 pass.

From the multiple offense, we had a total of 44 running plays and 16 pass patterns. But of the 44 running plays there were only 13 basic patterns to learn and of the 16 pass patterns only 6 were basic. We believe this is truly multiple simplicity.

•

Coach's Pay

(Continued from page 16)

others who handle similar activities.

Let's look at an actual differential schedule which was developed on a flat fee basis in a Northern Illinois high school with about 700 enrollment (Chart 2).

The above differential schedule was adopted in 1952 and went into effect in the school year 1953-54. It was considered to be adequate and equitable at that time. In 1952 the top figure on the salary schedule was $4000. Now it's $7000.

Assuming that the football coach was in the $4000 bracket, the $400 he was getting for coaching football represented 10% of his teaching salary. It's logical to assume that the relationship of teaching and coaching insofar as time, effort, and educational requirements are concerned have remained essentially the same. If this is true shouldn't the increment paid for coaching keep pace with the basic salary schedule?

If we agree to this, the football coach (assuming he's still at the top of the salary schedule) would be getting $700 for coaching, which represents 10% of his $7000 basic salary instead of the $400 increment established in 1952.

There undoubtedly are a number of methods of attaching increments to salary schedules. The above example suggests a simple and logical way of calculating how much a coach should be paid for a particular assignment.

First, it would be necessary to determine what percent of the total teaching time the coaching assignment involves, then find the individual coach's position on the salary schedule and take the pre-determine percent of this amount on the salary schedule and add it to whatever he would be receiving as a regular classroom teacher.

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Chart 3 shows how the percentage method can be used to work out an increment schedule:

CHART 3

Sport	% of Time And Effort	Place On Sal. Sch.	Coach Incr.
Football (head)	10.0%	$7000	$700
Football (asst.)	7.5%	6200	465
Basketbal (head)	12.5%	6000	750
Basketball (asst.)	7.5%	6200	465
Track (head)	7.5%	6000	450
Track (asst.)	5 %	5800	290
Swimming	7.5%	5600	420
Wrestling	10 %	6400	640
Golf	5 %	6000	300
Tennis	5 %	5600	280
Baseball	7.5%	6800	510
Cross-Country	5 %	6700	335
Intramurals	10 %	5500	550

Assuming in Chart 3 the percent of time and effort is correct, then apply the formula as developed giving credit for experience and training. Granted that the increment schedule in Chart 2 is equitable, the percentage scale is determined by using the 10% value placed on the football coaching job and working the others out accordingly.

For example, under Chart 2, football pays $400 and is estimated at 10% of the coach's teaching job; therefore, Cross-Country, which pays $200, is given a 5% value or $335. Other percentages can be worked out in the same manner.

Obviously these percentages would vary with the community, depending upon the degree of emphasis placed on the various sports, the length of season, the amount of help provided, and other factors which may be peculiar to the local situation.

How much is a coach worth? We can answer this only by attacking the question as a professional problem. The educational experiences provided in a well-conducted athletic program are numerous and have a great deal of influence for good on the youth of America.

The men who handle these activities are part of the teaching profession and should expect and work toward the same professional salaries for coaching duties as for classroom teaching. This means being placed on the same kind of a progressive salary schedule as the profession.

When he has achieved this, the coach will be paid a salary commensurate with his experience and educational background and the ability of the district to pay. It will have a wholesome effect on the athletic program in that it will become a more intergral part of the educational program.

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Jump Passing

(Continued from page 30)

having him momentarily block the opposing player before going into his desired pattern.

Head fakes, body and step fakes, roll-outs, and low diving charges may also be used to elude the defensive player. One essential technique each receiver must learn is to use a vigorous arm action in starting. The arm action aids in a faster start and may be a factor in warding off the defensive player.

The individual technique of getting behind or inside position on a linebacker lined up to the inside of the receiver is a more difficult maneuver. Slight changes from the regular slant-in pattern are necessary.

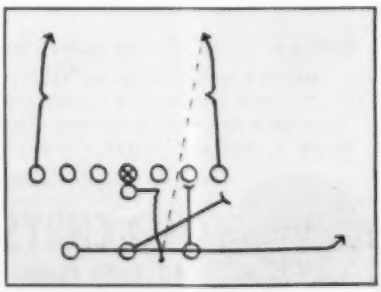
In an effort to make the linebacker move to the outside, the receiver may take three or four sharp steps on a diagonal course to the outside and then break for his slant-in pattern. Another method is for the receiver to fake the spot pass and then move in his normal pattern.

These methods are incidental, however, to a good running play fake which holds the inside linebackers in position. With the linebacker to his inside, the receiver has good blocking position for a run to the outside, and thereby the jump pass attack enhances the running game.

The use of flankers or wingbacks offers added receivers for the jump pass and makes coverage much more difficult. If there are three or four possible receivers on or within one yard of the line of scrimmage, it's nearly impossible to jam all of them.

An automatic call at the line of scrimmage can designate the receivers who are not being jammed or are in the best position to be open. Obviously, three or four receivers cannot run a slant-in pattern without overloading the area both with offensive and defensive players.

In addition to the basic jump pass



Diag. 6, Deep Pass after Fake Jump

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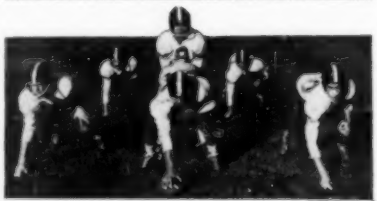
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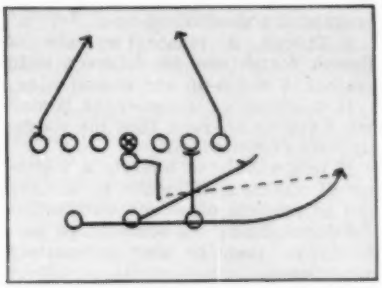
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pattern, several variations can be used which exploit the tightening of the defensive secondary when the passer jumps into the air faking the pass.

In one pattern (**Diag. 6**), the obvious receivers of the basic jump pass slow down and fake a possible reception as the passer jumps. Then, as the secondary defender moves up, the receiver turns on full speed in an effort to get behind the secondary.



Diag. 7, Swing Pass after Fake Jump

In the second pattern (**Diag. 7**), a halfback swings wide behind the line as the jump pass is faked. In both instances the passer, after jumping and faking the pass, comes down with the ball, perhaps backing up several steps, and throws.

It's possible for a major portion of a team's offense to be built around the threat of the jump pass. Except in unusual circumstances, this isn't advocated. However, the basic jump pass can pay real dividends in your offense and enable you to overcome many difficult situations on the gridiron.

•

Respiratory Factors

(Continued from page 49)

containing the lungs is quite light. The center of buoyancy of the average swimmer lies somewhere in the chest.

3. The angle of flotation can be defined as the angle which the body will take with the surface of the water when the lungs are fully inflated and the body is stretched as long as possible. It can be of considerable importance in swimming.

A swimmer who floats flat doesn't have to expend energy to maintain his body position. On the other hand, the more a person's legs sink, the greater will be the energy he'll have to expend to achieve a good swimming position.

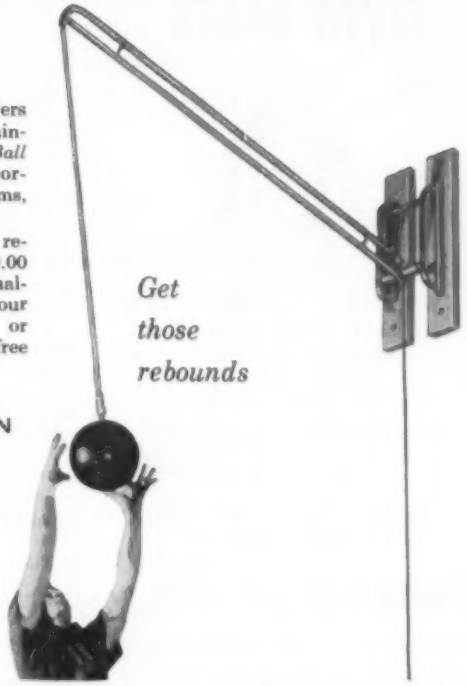
The angle of flotation of an individual is determined by the relative positions of his center of gravity and his center of buoyancy. Since the center of gravity represents the central location of all of the downward forces of weight and the center of buoyancy the central location of all of the up-

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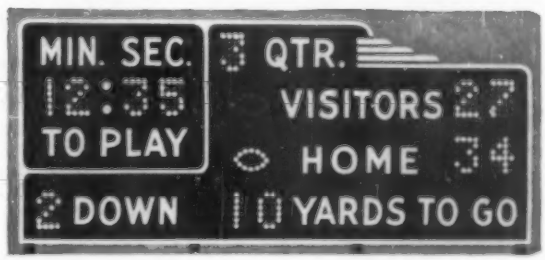
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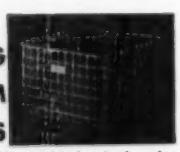
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ward forces of buoyancy, the center of gravity will tend to swing to a position directly below the center of buoyancy.

That is, an imaginary line drawn through these two centers will always seek a vertical position when the body is floating freely in water.

The angle of flotation between the long axis of the body and the surface of the water can be modified by breathing.

The closer the center of buoyancy is to the center of gravity, the smaller (better) will be the angle of flotation.

Diaphragmatic breathing tends to move the center of buoyancy back toward the center of gravity.

An empty stomach permits greater movement of the diaphragm. This is only one of several reasons for limiting food intake for several hours prior to competition.

As an aid to both buoyancy and arm strength, many swimmers use an explosive type of irregular breathing. The pattern is to inhale, hold the breath until just before the next inspiration, and then exhale explosively.

1. The average specific gravity of the human body with the lungs full is .988 or just light enough to permit floating. After expiration, the average specific gravity rises above 1.0, or enough to sink the body. The swimmer who uses the explosive type of breathing takes full advantage of this buoyancy over a maximum period of time.

2. The propulsive force of the arms is increased when the chest is immobilized by holding the breath. This establishes a firm base from which the arm muscles can operate.

3. The explosive type of breathing is highly recommended, especially for the swimmer with a dense physique, so long as complete expiration is achieved.

Although the mechanism of "second wind" is probably not primarily a respiratory phenomenon, the chief characteristic is a sudden relief of respiratory distress.

The exact physiological processes involved in second wind aren't known fully. However, authorities agree that it represents an adaptation to strenuous activity. A number of changes have been reported as consistently occurring in conjunction with second wind.

1. There's sudden relief from breathlessness accompanied by a reduction of respiration rate and an increase in depth of breathing.

2. There's a rise in the temperature of the working muscles denoting more adequate blood circulation and probably increased chemical activity. Muscular pain is relieved, and muscular work is eased.

3. There's a reduction in heart rate, perhaps indicating an increased stroke volume (quantity of blood ejected per beat of the heart).

4. There's a clearing of the head and a loss of dizziness.

Some athletes report the occurrence of second wind while others do not. In general, the most highly conditioned don't seem to have this experience during competition.

It's logical to assume that the adjustment to exercise, commonly called second wind, can be made gradually during a long, intense warm-up period.

1. If this is the case, then the apparent lack of second wind in a well-trained athlete can be explained. Generally, he's able to and does take an adequate warm-up prior to competition. Frequently, this warm-up will include a number of so-called "wind-sprints" alternated with easier work. There's no fear of "having left his race behind in the pool" after he completes a good warm-up.

2. There's a reasonable rule of thumb which can be followed with respect to warm-up and second wind:

If a swimmer experiences second wind during his race, then his warm-up hasn't been adequate.

If he's unable to tolerate a warm-up of sufficient intensity to achieve the adjustment of second wind without jeopardizing his competitive performance, then he isn't adequately conditioned.

•

Pass System

(Continued from page 26)

If we find a play to be more effective with a potential receiver staying put and blocking, our play would be called: "Pass, halfbacks flanked, 9301." Note that the left half is now the receiver to the extreme left. He must run the maneuver corresponding to the first number called. This pattern is shown in #13.

When circumstances necessitate the use of four receiver (#14) the "0" (zero) assignment of the right end can be changed to any suitable pattern by simply inserting the number of the desired pattern in the place of the "0" (zero). For example: "Pass, halfbacks flanked, 9391."

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each end and three for all the backs. The rules are:

Left End: No flanker to your left, the first number of the play is your pattern.

With a flanker to your left the second number of the play is your pattern.

Right End: No flanker to your right, the last number of the play is your pattern.

With a flanker to your right the next-to-last number of the play is your pattern.

All Backs: If flanked left outside the end, the first number of the play is your pattern. If flanked inside the end, the second number is your pattern.

If flanked *right*, outside the end, the last number of the play is your pattern. If flanked inside the end, the next-to-last number of the play is your pattern.

If you dive, the second number of the play is your pattern, unless a flanker is left; in this case, the third number is your pattern.

A man-in-motion is treated the same as a flanker.

We feel this system is a valuable part of our attack because:

1. The potential receivers miss fewer assignments because they associate their number with a set pattern.

2. It requires memorization of only a few pertinent patterns, numbers, and rules. This exercises the process of association, rather than rote memorization.

3. The signal-caller can utilize his receivers to meet almost any situation.

4. If the occasion arises, the plays can be called or adjusted at the line of scrimmage by simply dropping the word "Pass."

The signal-caller is the key to this system, as he is in all offensive systems.

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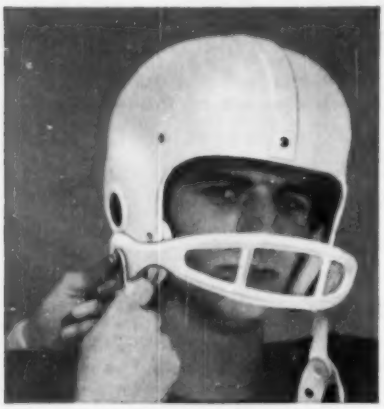
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